

INDUSTRIAL RESEARCH INSTITUTE
INSTITUT DE RECHERCHE INDUSTRIELLE



2010 ANNUAL REPORT



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IRI IN BRIEF

Established in 1953, the IRI is a Lebanese institution for studies, industrial research and scientific testing and analysis.

It is a Conformity Assessment Body; it delivers quality system certification, product certification and certification of persons.

IRI is a not-for-profit institution, declared of public utility by D/L n° 10059 dated 17 August 1955, linked to the Ministry of Industry by Law n° 642/1997, with administrative and financial autonomy.

The activities and services of the Institute are organized to realize the following aims:

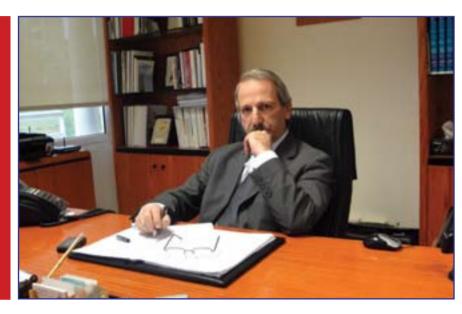
- To conduct studies and research relevant to the establishment of new industries
- To investigate and disseminate information about available raw materials with a view to defining their use and establishing the best means for their exploitation
- To provide, on an international scientific level, reliable services in testing and analysis and to grant certificates of quality or conformity with standards and purchase specifications
- To provide specialized technological, management and economic consulting services to existing industries and industrial development schemes
- To maintain close co-operation with official institutions, industrial organizations, and development boards both on the national and international levels in matters relating to the industrial development of the country.

OUR ETHICAL STANDARDS

In carrying out its functions, the Institute adheres to ethical and professional standards whereby it safeguards the client's best interests and regards as the client's property any information, processes, patents or techniques developed during work for him and safeguards such matters in complete secrecy.



FOREWORD BY THE DIRECTOR GENERAL





THE ACTIVE SCIENTIFIC HIVE

Once again and despite all obstacles and hindrances, the Industrial Research Institute remains to be energetically active. The employees perseverance is exemplary in it's relentless Endeavour's despite the various sources of difficulties.

As the proverb says "deeds speak more than words", the rate of growth of IRI's Activities during the year 2010 is outstanding. Scores were broken at more than one activity and level. If we let the numbers speak, they would translate more than 270.000 tests and analysis from the laboratories as for studies the custom files have exceeded 30.000 files. While in calibration and metrology more than 8000 activities were conducted.

Under the interactive supervision of the top management, the IRI's human technical personnel were relentless in the upgrading of all activities and specially in the continuous process of developing new methodologies to cover all the requested needs and fields

Not forgetting the activities and efforts made by both the European-Lebanese center for Industrial Modernization, and the Lebanese center for cleaner production and in collaboration with them to the benefit of the development of Lebanese industry to guarantee it's competitiveness in the world market.

The Institute is proud of its extensive cooperation with the international commissions concerned about industrial research, in particular the institutions that gave it the right to adopt their emblem to confirm the safety of the industrial products and their conformity with the international standards and specifications. This cooperation is translated whether by checking the updates of these specifications, or by participating in scientific seminars and discussions that clarify new concepts or develop them, as well as by the attendance by of worldwide seminars and workshops, and in this regard, the Institute has joined the membership of the International Organization for Non-Destructive Tests.

The Institute has organized scientific workshops on regional and international levels, and has participated in similar seminars and activities; therefore it proved its scientific presence and attendance on the conducted research level, and the annually updated research discussions worldwide. The Institute also sought to expand its influence regionally by transferring its scientific knowledge and professional expertise to the institutions and establishments in Arab, Asian and African countries.

On the national level the Institute has strengthened its role via concluding cooperation agreements between the European - Lebanese Centre for Industrial Modernization and the Chamber of Commerce, Industry and Agriculture of Beirut and Mount Lebanon,

and between the Lebanese Centre for Cleaner Production and the Faculty of Agriculture at the Lebanese University. The Institute launched also the Food Consulting Unit in collaboration and partnership between the Institute and the Lebanese Chambers, Universities, and the Association of Food Industries, in order to develop food products and improve the export capabilities, and packaging, and to maintain the quality within the international required specifications, and help them to enter new markets and increase their productivity.

The Industrial Research Institute continues to implement its strategy of always developing and modernizing it's laboratories, and creating scientific

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innovations that place it internationally on the list of the Scientific Innovation and Development Centers. Under the care of its Directorate General and in cooperation with its technical personnel, the Institute continues to register pages of success rarely achieved by a management in its development over a short period. Despite working against the tides, we aim at a goal of setting a definite positive interactive zone with all those concerned in order to help launch the Lebanese industry in the center of globalization requirements.

Services & Activities

LABORATORY ACTIVITY

Compared to the practical realities of the daily work activity in the laboratories of the Industrial Research Institute, which totaled 236,527 during the year 2010, we can described this activity as a "beehive", especially that the daily average rate of testing and analysis during the annual working days, has increased from about 600 to about 800 tests distributed to all types of laboratories.

The average annual growth rate has increased during the pack of four years, from 12.5 percent to 17.2 percent between 2007 and 2010. These laboratories have achieved a growth rate of 27 percent over the past year.

TESTS AND ANALYSES

The total analysis amounted 236,527 in 2010 versus 174,592 (except welding section), in 2009. The testing and analysis processes have increased by more than 47,127 process, more than a quarter amount of the operations in the previous year, to reach 27 percent.

However, this increase did not encompass the various sections of the laboratory, but the analysis and testing in the textile and leather laboratories decreased due to the decline of this industry locally. The laboratories activities were distributed statistically as follows:

CHEMISTRY LABORATORIES

The activity and growth of these laboratories are distinguished so that they doubled in a year. This activity included 50 855 analysis and tests versus only 27,205 in 2009, with an increase of 23 650 analysis and tests which rate is 87 percent, and it is a considerable increase that makes the average growth of these laboratories' activities of 44.5 percent annually between 2007 and 2010.

MICROBIAL LABORATORIES

The activity of these laboratories is twice more it was in 2009, it achieved 30 232 tests and analysis in 2010, with an increase of 15 893 tests and analysis of an almost rate 111 percent, making the average annual growth rate of 46 percent since 2007.

NUMBER OF TESTS FOR EACH LAB 2007 -					
Laboratories	2007	2008	2009	2010	
Wet & Physical Chemistry	16,861	21,176	27,205	50,855	
Microbiology	9,713	12,316	14,339	30,232	
Textile & Leather	3,165	3,232	3,999	3,844	
Paint & Petroleum	2,661	1,470	1,933	2,079	
Civil Engineering & Soil	36,161	41,444	50,814	55,486	
Electrical	58,255	58,886	65,061	66,266	
Bread (CLBW)	9,967	11,100	11,241	12,957	
Welding	11,275	17,660	14,335	14,808	
Total	148,058	167,284	188,927	236,527	

TEXTILE AND LEATHER LABORATORIES

Despite the fact that these laboratories achieved an increase in their activity since 2007 at an average annual rate of 6.7 percent, however it receded in 2010 compared to the previous year, registering 3844 tests and analysis, lower by 155 tests and analysis which rate is 3.87 percent.

DIL AND PAINT

Analysis and tests made in oil and paint have increased by 7.5 percent in 2010, restoring some of its losses in 2007. The analysis and tests reached 2079 with an increase of 146 tests.

CENTRAL LABORATORY FOR FLOUR, BREAD, AND CEREALS

These laboratories conducted 12.957 tests and analysis in 2010, with an increase of 1716 tests and analysis from the year 2009 with a rate of 15.2 percent. The average annual rate reached 9.2 percent since 2007.

CIVIL ENGINEERING AND SOIL

These laboratories have the second largest share of tests and analysis after the laboratories of electricity and before the Laboratories of chemistry, therefore accounting for 23 percent for a total of 55 486 tests and analysis, with an increase of 4672 tests and analysis at a rate of 9.2 percent compared to 2009, while the average annual growth rate has reached 15.4 percent since 2007.

ELECTRICITY LABORATORIES

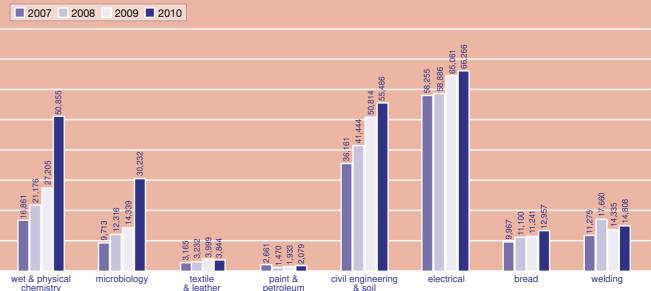
Their share amounted to 28 percent of the total analysis and tests achieving 66.266 analysis and test with an increase of 1205, rated 1.8 percent more than in 2009, compared with an average annual rate of 4.4 percent since 2007.

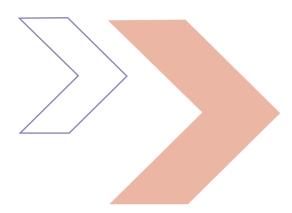
WELDING LABORATORIES

14 808 tests and trials were conducted in the welding laboratories, with an increase of 473 tests, rated to 3.3 percent, at an average annual growth rate of 9.6 percent since 2007.

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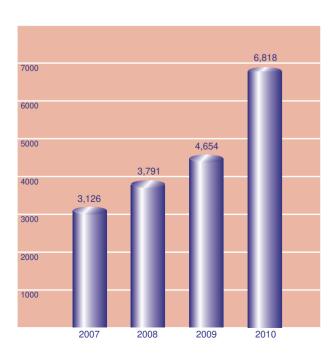


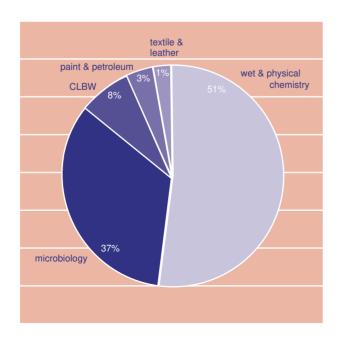


WORK AUTHORITIES REPORTS

2007 - 2010

Laboratory	2007	2008	2009	2010
Wet and Physical Chemistry	1,549	1,956	2,337	3,546
Microbiology	740	1,005	1,409	2,492
Bread (CLBW)	584	560	464	535
Paint and Petroleum	125	170	329	172
Textile	128	100	115	73
Total	3,126	3,791	4,654	6,818





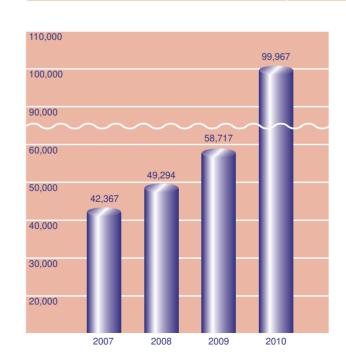
NUMBER OF TESTS

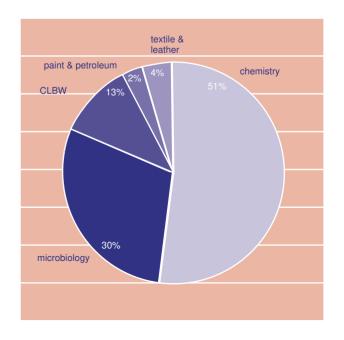
Laboratory	Regular	Customs	Total
Bread (CLBW)	12,950	7	12,957
Chemistry	47,365	3,490	50,588
Microbiology	27,479	2,753	30,232
Paint and Petroleum	1,231	848	2,079
Textile	1,012	2,832	3,844
Total	90,037	9,930	99,967

COMPARISON:

2007-2010

Laboratory	2007	2008	2009	2010
Bread (CLBW)	9,967	11,100	11,241	12,957
Chemistry	16,861	21,176	27,205	50,855
Microbiology	9,713	12,316	14,339	30,232
Paint and Petroleum	2,661	1,470	1,933	2,079
Textile	3,165	3,232	3,999	3,844
Total	42,367	49,294	58,717	99,967





STATISTICS

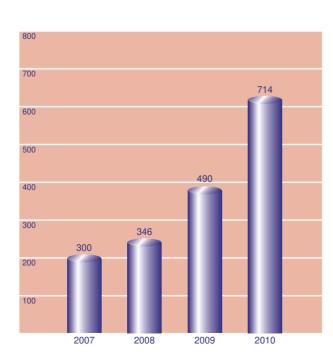
Type of Product	Number of samples	Number of tests
Grains	204	1,429
Flour	1,205	13,257
Bread	8	64
Raw and dry pasta and cereal flakes	110	770
Dairy products	1,023	5,115
Meat and meat products	639	3,626
Ready-to-eat cooked foods-snacks	172	730
Nuts, nut products and coffee	1,226	6,312
Oils and fats	1,154	5,766
Vegetables, fruits and processed vegetables	386	4,149
Spices and condiments	43	358
Sugars and syrups	145	531
Jam and honey	113	595
Salt	68	476
Chocolates, biscuits, and cocoa	897	5,382
Sweets	277	693
Water	1,061	6,985
Rose water and orange blossom	8	64
Non-alcoholic beverages	1,013	4,892
Alcoholic beverages	391	1,503
Eggs and sauces	855	5,985
Animal feed	42	294
Fertilizers and compost	25	177

Type of Product	Number of samples	Number of tests
Pesticide residue and chemicals	344	2,017
Halawa and Tahineh	904	1,046
Cosmetics, soaps and shampoos	1,270	6,417
Detergents	421	1,988
Disinfectants	10	52
Textile and textile products	266	2,196
Diapers, gauze, and napkins	737	3,845
Paper and paper products	25	27
Plastics, leather and rubber	351	957
Swabs	46	66
Herbs	34	216
Antibiotics	6	12
Pharmaceutical products	4	25
Ores, soil, sand and glass	561	1,062
Steel bars	670	5,363
Aluminum	134	625
Metals	296	1,140
Cement	262	1,346
Paint	24	208
Extinguishers	6	12
Chemical products	25	323
Petroleum products	456	1,871
Total	17,917	99,967



EXPORT TO ARAB COUNTRIES, EUROPE AND THE UNITED STATES

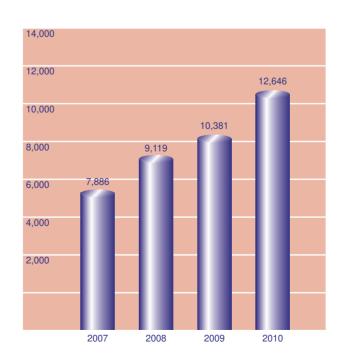
Product	Number of reports
Beer including sealing	54
Alcoholic beverages	8
Non-alcoholic beverages	98
Juices	2
Nuts and nuts products	10
Chocolate and sweets	2
Tahineh, Halawa and olive oil	82
Herbs	2
Vegetables and processed vegetable products	1
Detergents	16
Cosmetics	372
Napkins, toilet paper and facial tissues	64
Industrial products	3
Total	714





REPORTS AND ATTESTATION FOR IMPORT (CUSTOMS DECLARATION)

Field		Number of Files
Cosmetics	Forbidden components 430 Provisionally allowed 65	4,300
Food/Food products	Preservatives 67 Emulsifier, thickener, stabilizers 252 Antioxidants 180 Artificial Sweeteners 25 Colors 90	4,300
Detergents	Full Analysis: Powdered detergent, liquid dishwashing, olive oil soap	1,011
Baby Diapers	Full Analysis	588
Hydraulic oils	Full Analysis	720
Glass	Analysis and Inspection	303
Dairy products	Full Analysis	454
Paint/Paint products	Full Analysis	214
Soy and Corn oil	Full Analysis	107
Miscellaneous	-	649



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EXTERNAL INSPECTION



The Laboratories of the Industrial Research Institute have conducted 30566 external control processes with a decrease of 5025 processes less than in 2009, representing 14.1 percent, versus an increase 10085 control processes in 2009, what makes the average annual growth rate of 37.3 percent since 2007.

These processes include the control of the natural



gas reservoirs and its thorough checking through 400 processes, and oil control of oil tanks and their calibration in 126 processes, and the control of boilers in 140 processes, to 29 900 control processes of containers' pressure. And these operations have controlled 65 thousand gas bottles locally manufactured, and 30 thousand imported.

EXTERNAL INSPECTION

Activitiy	2007	2008	2009	2010
LPG Storage Tanks Inspection	196	328	405	400
Fuel Tanks Inspection & calibration	91	188	144	126
Boiler Inspection	179	165	170	140
Other Pressure Vessels	11,350	24,925	34,872	29,900
Total	11,816	25,606	35,591	30,566
LPG Cylinders - Locally Manufactured		3		65,000
LPG Cylinders - Imported			20,000	30,000

METROLOGY LABORATORY

These laboratories have received 894 samples from various companies, conducting on them 8204 tests. The samples' acceptance achieved an increase by 7.5 percent versus a 9.6 percent increase in testing operations on these samples, compared to the year 2009.

The evolution of these laboratories' activity is highlighted as follows:

HEAT

196 samples were submitted to these laboratories, and 1960 tests were conducted on them, at an average rate of 10 tests per sample. And the submission of samples has evoluted at an average rate of 26.8 percent annually since 2007, compared to 33.4 percent for the

tests. In comparison for 2009 an increase by 19.5 percent was made for the first one, and a 25.6 percent for the second.

PRESSURE

The number of samples submitted to laboratories of pressure has reached 77, on which 616 tests were conducted, at a rate of 8 tests per sample. The number of samples has increased by 18.5 percent more than in 2009, and the number of tests by 14.9 percent.

POWER

The power measuring laboratories have received 3 samples on which 24 tests were conducted, at a rate of 8 tests per sample.

BLOCKS

The number of blocks' samples reached 463, on which 4630 tests were conducted, at a rate of about 10 tests per sample. In comparison to 2009, the number of samples fell by 5.7 percent, and the tests by 2.9 percent. But the samples submission has evoluted annually at an average rate of 15.3 percent since 2007, and the related conducted tests rate at 17.7 percent.

DIMENSIONS

The number of samples declined from 38 in 2009 to 36, and the number of tests from 304 to 288 and at a rate of 5.3 percent for each one.



ELECTRICITY

Tests made on samples in the field of electricity have known a considerable development between 2009 and 2010, as their number has risen from 49 to 79 and at a rate of 61 percent. The number of tests has risen as well from 392 to 632 and at a rate of 61.2 percent. The share of each sample reached eight tests. And the number of samples and tests has evoluted at an annual average rate of 6.7 percent since 2007.

DIFFERENT TESTS

The number of samples has increased from 18 to 40, and the tests from 144 to 324, between 2009 and 2010, and at a rate of 122 percent for the samples and 125 percent for the tests, at an average of 8 tests per each sample. The average annual growth rate has evoluted at a rate of 22 percent for the samples, and 22.5 percent for the tests.

METROLOGY (CALIBRATION)

METROLOGY (DALIDRATION)								
2007		20	2008		09	2010		
Technical Subjects	Item	Test	Item	Test	Item	Test	Item	Test
Temperature	96	825	132	1,263	164	1,560	196	19,60
Pressure		248	55	678	65	536	77	616
Force	26	208	15	120	7	56	3	24
Mass	302	2,676	283	2,504	491	4,492	463	4,360
Length	53	424	21	336	38	304	36	288
Electricity	65	520	136	1,032	49	392	79	632
Others (Acoustic, Flow etc)	22	176	22	184	18	144	40	324
Total	595	5,077	664	6,117	832	7,484	894	8,204

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CERTIFICATION

MANAGEMENT SYSTEM CERTIFICATES

Twenty three institutions have received a certificate of ISO 9001

Two institutions have got a certificate of ISO 14000 environmental management system,

Two institutions have got a certificate of ISO 13485 quality system for medical devices,

And one institution has got a certificate of ISO 22000 in the food safety system.

QUALITY SYSTEM CERTIFICATION

ISO 9001 - Quality Management System	23 Certified Companies	
Château Kefraya, since 2006	Nasri Karam & Sons, since 2003	Château KSARA, since 2003
TUV Hellas, since 2008	Rim Co., since 2002	Produits & Solutions Informatiques- PSI, since 2002
Medical Distributing & Manufacturing (MDM), since 2003	Holcim (Liban) SAL, since 2003	El Youssef Medical Center, since 2005
LECICO, since 2008	Holcim Béton, since 2008	Harfouche for Trading & Industring EST. (Pastel Paints), since 2004
Integrated Digital Systems, since 2004	Nakhlé Zgheib & Co., since 2008	Bel Labtronic, since 2004
Lebanese International Technologies since 1999	Dora Flour Mills since 2004	Building Chemicals Company since 2008
Chirak Printing Press, since 2008	Betomix, since 2009	Clinserv International, since 2009
Aclinic, 2010	Mondi Lebanon, 2010	

ISO 14000 - Environmental Management Sy	stem 2	Certified Companies
Holcim Liban SAL	Société Lib	panaise des Ciments Blancs
since 2004	(SLCB) sind	ce 2009

ISO 13485 - Medical Devices: Quality Mana	gement System	2 Certified Compani	es
MDM, 2010	Steritech, 2010		

ISO 22000 - Food Safety Management Syst	n 1 Certified Company
Chateau KSARA, 2010	

PRODUCT CERTIFICATION

Forty four products have got the product quality certificate from the Industrial Research Institute in 2010, within the production 8 industrial enterprises.

IRI Product Certification 24 Certified Products by 9 Companies						
Almaza -Almaza Beer alcoholic -Almaza non-alcoholic -Laziza non-alcoholic	Cimenterie Nationale -P 52.5 BTNA RMS -P 42.5 BTNA RMS -P 42.5 -PAL 42.5	Ciment of Sibline -P42.5 RMS (par lot) -PAL 42.5 -P 42.5				
Future Pipes -Concrete Pipes -Glass reinforced plastic pipes -Rubber gaskets	Holcim -P 42.5 BTNA RMS -PAL 42.5 Mer -PAL 42.5 Montagne -PAZ 42.5 -P 42.5	LECICO -Floor and wall tiles BIIb -Floor and wall tiles BIII -Sanitary ware				
Lematic -Refrigerators, freezers and bottle coolers	Sannine -Bottled mineral water 0.5L, 1.5L, 2L	Daher International Food Co. S.A.L20 products				

CERTIFICATION OF PERSONNEL

IRI grants certificates to individuals enabling them to check the quality of systems and products, in collaboration with the French institution, "MODI". These certificates were distributed in 2010:

- 92 internal auditors
- 95 auditors in the quality systems
- ❖ 3 auditors in environmental systems
- 3 auditors in food systems
- GAP Analysis for CCIA
- 6 auditors in the ways of the size and calibration (from Iraq).

Certification of Personnel 2010		
« Internal » Auditors	92	
« IRCA » Auditors for auditing quality systems	95	
« IEMA » Auditors for auditing environmental systems	3	
« IRCA » Auditors for auditing alimentary systems	3	
Analytical Training: Chemical & Microbiological examination (persons from Iraq)	43	
GAP Analysis for CCIA-Zahle & Saida and LAPI-Fanar		
Mass & scale calibration method (persons from Iraq)	6	

LEBANESE WELDING CENTER

The Institute has granted 91 certificates for welding through the Lebanese Center for Welding, and a certificate of inspection in the non-destructive testing.



Lebanese Welding Center	2007	2008	2009	2010
Welders certified by IRI	83	127	82	91
Inspectors in non-destructive testing	0	1	1	1

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CUSTOMS FILES

The Industrial Research Institute continue to accomplish tasks in customs' files studying and scrutiny, among the tasks entrusted to it since 2005, so that the Institute be sure that the imported products are matching in conformity the mandatory Lebanese standard characteristics.

The number of incoming files to the Institute for scrutiny has risen from 18532 files in 2007 to 28141 files in 2010 at an annual development average rate of 14.94 percent. The increase was 4183 files in 2010 compared to 2009, and at a rate 17.45 percent.

As a result of auditing we found out that 1141 files does have the mandatory conditions, and they constitute 4.5 percent of the overall files, hence 1112 of them were re-corrected.

The customs files studies were distributed as such:

FILES NOT SUBJECT

These are files received by the Industrial Research Institute, but are not subject to checking process, but they are beyond it because they are not subject to mandatory standards. They have risen from 4594 files in 2007 to 7.754 in 2010 and at an annual development average rate of 19 percent versus an increase of 16.9 percent during 2010, than in 2009.

IN 2010 THE INSTITUTE CHECKED AN AVERAGE OF 100 FILES PER DAY

PRE-SHIPMENT

The number files relevant to the cargo pre-screening prior to shipment in the exporting country, has increased from 2274 to 2788 files and at an annual development average rate of 7 percent since 2007, while in 2010 it increased by 10.7 percent.

HORIZONTAL SPECIFICATIONS

The number of files subject to special horizontal specifications has evoluted at an annual average of 15.6 percent increasing from 4,300 to the 6649 files. The rate of its increase has reached 21.5 percent in 2010 compared to what it was in 2009. These files are examined and returned to their owners in the same day.

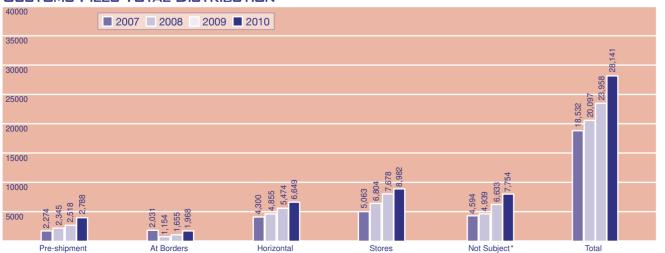
CHECKING GOODS IN STORAGE

The goods' files that are checked after storage have increased at an annual average rate of 21 percent since 2007, rising from 5063 to 8982 files. The increase amounted to about 1304 files from 2009, constituting a 17 percent rate.

CHECKING GOODS AT BORDERS

The number of files reached 1968 from 1655 in 2009, and at an increase of 313 files, representing 18.9 percent rate.

CUSTOMS FILES TOTAL DISTRIBUTION



DISTRIBUTION OF FILES BY TYPE & GATE

The customs files were distributed as follows: 41.8 percent for electrical equipment and products, this said 11 763 files. The soil (clay or ceramic) counts 2851 files (10.1 percent). Chemical products count 11133 files (39.6 percent). Mechanical devices count 485 files, public files count 1463, Rebars count 316 files, and 130 pressure files.

The port of Beirut has taken 15.992 files, representing 56.9 percent of the total files, and the International Airport of Rafik Hariri has taken 5863 files representing 20.8 percent, and the factory 3370 files constituting 12 percent.

CUSTOMS FILES TOTAL DISTRIBUTION (%)



2010

CUSTOMS FILES BY TYPE

Electrical	Soil	Chemical	Mechanical	Common Files	Rebars	Pressure	Total
11,763	2,851	11,133	485	1,463	316	130	28,141
9,557	2,269	11,133	485	1,463	316	130	25,353
3,415	134	3,527	67	504	44	63	7,754
6,142	2,135	7,606	418	959	272	67	17,599
683 7.15%	420 18.51%	36 0.32%		in E, C & S		2 1.54%	1,141 4.5%
671	420	20		in E, C & S		1	1,112
12	0	16	0	in E, C & S	0	1	29
	11,763 9,557 3,415 6,142 683 7.15%	11,763 2,851 9,557 2,269 3,415 134 6,142 2,135 683 420 7.15% 18.51% 671 420	11,763 2,851 11,133 9,557 2,269 11,133 3,415 134 3,527 6,142 2,135 7,606 683 420 36 7.15% 18.51% 0.32% 671 420 20	11,763 2,851 11,133 485 9,557 2,269 11,133 485 3,415 134 3,527 67 6,142 2,135 7,606 418 683 420 36 7.15% 18.51% 0.32% 671 420 20	11,763 2,851 11,133 485 1,463 9,557 2,269 11,133 485 1,463 3,415 134 3,527 67 504 6,142 2,135 7,606 418 959 683 420 36 in E, C & S 7.15% 18.51% 0.32% in E, C & S	11,763 2,851 11,133 485 1,463 316 9,557 2,269 11,133 485 1,463 316 3,415 134 3,527 67 504 44 6,142 2,135 7,606 418 959 272 683 420 36 in E, C & S 7.15% 18.51% 0.32% in E, C & S 671 420 20 in E, C & S	11,763 2,851 11,133 485 1,463 316 130 9,557 2,269 11,133 485 1,463 316 130 3,415 134 3,527 67 504 44 63 6,142 2,135 7,606 418 959 272 67 683 420 36 in E, C & S 2 7.15% 18.51% 0.32% in E, C & S 1 671 420 20 in E, C & S 1

^{*} the goods were found not subject to the requirements of the mandatory technical Lebanese standards

CUSTOMS FILES BY ENTRY POINT

Location	Electrical	Soil	Chemical	Mechanical	Common Files	Rebars	Pressure	Total
Masnaa	378	46	2,496	319	90	24	17	3,370
Port	5,682	2,203	6,525	139	1,138	206	99	15,992
Airport	3,480	20	2,087	27	235	0	14	5,863
Tripoli	17	23	0	0	0	82	0	122
Tyr	0	0	2	0	0	0	0	2
Saida	0	0	0	0	0	4	0	4
Pre-shipment (port)	2,206	582	0	0	0	0	0	2,788
TOTAL	11,763	2,874	11,110	485	1,463	316	130	28,141
Average/Day	40.3	9.85	38	1.67	5	1.1	0.45	96.37

^{**} guidance provided by IRI to rectify non-conformity when possible



MEMORANDUM OF UNDERSTANDING

BETWEEN IRI & THE CZECH OFFICE FOR STANDARDS, METROLOGY, AND TESTING

21-25 JUNE, 2010

In the framework of the preparation of the ACAAs agreement (Agreement on Conformity Assessment and Acceptance of Industrial Products), TAIEX (Technical Assistance and Information Exchange Instrument) has organized a study visit to Prague that included the Czech Office for Standards Metrology and Testing (UNMZ), and at the Czech Engineering Test Institute.

The visit focused on three priority sectors that have been approved by Lebanon and the EU States through the ACAAs committee, which are: Construction products, Electrical equipment (low voltage), and Mechanical equipment (pressure related).

The discussions covered legislation issues, quality infrastructure (accreditation, certification, conformity assessment), standardization laws, harmonization and technical regulations. Particular attention was given to the European experience in product safety issues.

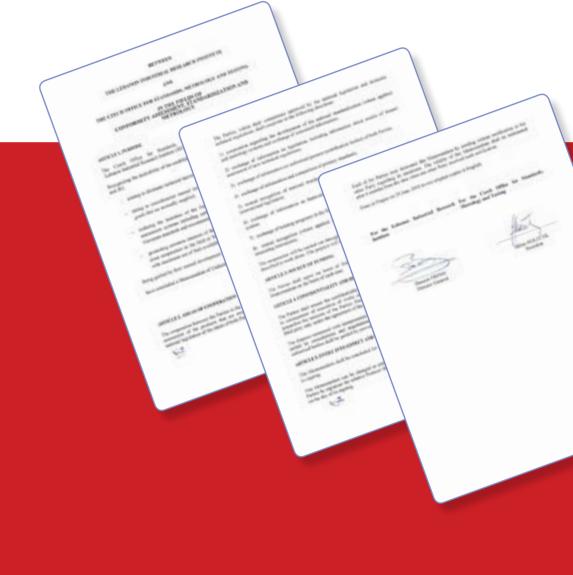
The Lebanese delegation was comprised of the IRI Director General, Dr. Bassam Frenn, Chairman of the ACAAs Committee and Director of the Quality Program at the Ministry of Economy and Trade, Dr. Ali Berro, and the Program Coordinator of the EU and UN Programs at IRI, Mr. Naji Abi Zeid.

Parallel to the visit, a Memorandum of Understanding in the fields of conformity assessment, standardization and metrology was signed between IRI, represented by Dr. Bassam Frenn, and the UNMZ, represented by its president Eng. Milan Holecek.





Dr. Frenn and Eng. Holecek signing the MoU







IRI LAUNCHED: THE «FOOD CONSULTING UNIT»





Commemorative photo during the launching

9 MARCH 2010

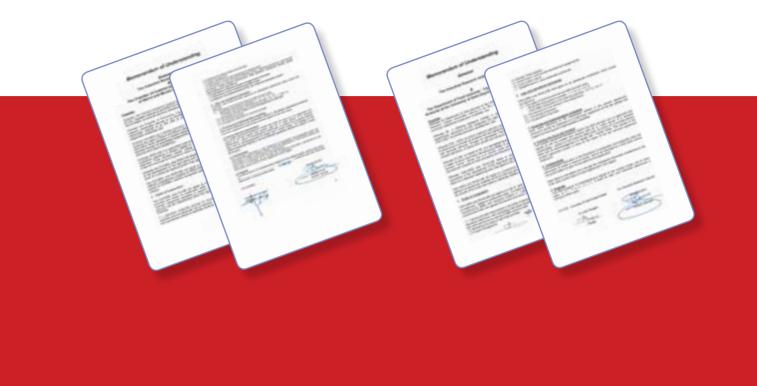
The Industrial Research Institute held a ceremony for the launching of the "Food Consulting Unit" under the patronage of the Minister of Industry, Engineer Ibrahim Dedeyan, at the Institute's headquarters in Hadath. Among the attendants were head of the Chamber of Commerce, Industry and Agriculture of Beirut and Mount Lebanon, Mr. Mohamed Choucair, head of the Sidon and the South Chamber, Mr. Mohammed Zaatari, and head of Zahle, and Bekaa Chamber, Mr. Edmond Juraisati, President of the Association of Food Industries, Mr. George Nasraoui, Manager of the "MACLE" program under UNIDO, Mrs. Soha Atallah, Dean of the Faculty of Agriculture at the Holy Spirit University, Mrs. Leila Geagea, as well as teachers and academics from the American University of Beirut and USEK University.

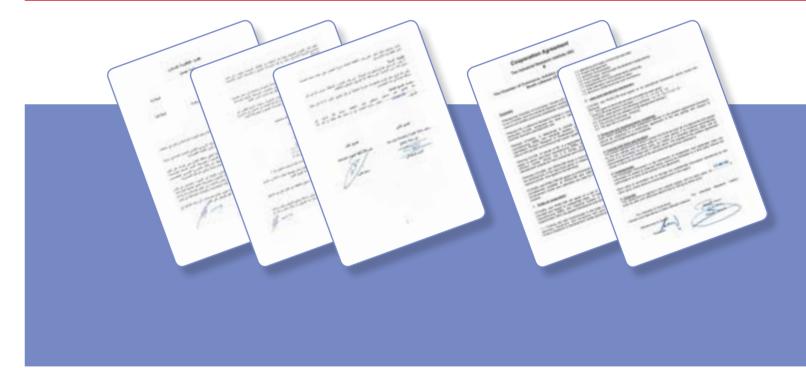
The project is the result of cooperation and partnership between IRI, the chambers, the universities and the Association of Food Industries, in order to develop food products and improve their export capabilities, as well as promote filling, packaging, and quality maintenance within the required international specifications, to help them to enter new markets and increase productivity.

The Director General of IRI, Dr. Bassam Frenn, pointed out during his speech, that the establishment of this unit aims to support food industries through investing technical resources and providing a concentrated services package for the Industrialists, related to the topics of awareness, quality, food safety and product development.

Mr. Choucair stressed on the importance of cooperation and partnership between the concerned parties, and that the Chamber of Beirut gives the utmost importance to supporting the national industry.

The Minister of Industry mentioned that the main concern of his ministry is to "support the activities of applied research and technological development and to find the appropriate mechanisms to support this vital field and link it to the industrial sector". The Minister then praised the efforts of Dr. Frenn and the ELCIM team as well as the professional staff working at iRI laboratories, such as engineers, economists, technicians and administrators.







MR. CHOUCAIR AND DR. FRENN SIGN THE AGREEMENT:

A BRANCH OF "ELCIM" IN THE CHAMBER OF BEIRUT AND MOUNT LEBANON





Dr. Frenn and Mr. Choucair signing the MoU

2 JULY 2010

The President of the Chamber of Commerce, Industry and Agriculture of Beirut and Mount Lebanon, Mr. Mohammad Choucair, and the Director General of the Industrial Research Institute, Dr. Bassam Frenn, signed a cooperation agreement which states the establishment of a representative office of the Euro–Lebanese Center for Industrial Modernization (ELCIM) at the Chamber in order to expand the scope of services provided to its adherents.

The signing ceremony was attended by Vice President of the Chamber, Mr. Mohammad El-Lama, President of Beirut Dealers Association, Mr. Nicolas Shammas, President of the Lebanese Association for Privilege Licensing, Mr. Charles Arbid, Chairman of the National Council for Lebanese Economists, Mr. Samir Rahal, Chamber Treasurer, Mr. Nabil Fahed, President of the Association of Food Industries Owners in Lebanon, Mr. George Nasraoui, Director

General of the Chamber, Mr. Rabih Sabra, the EL-CIM Director, Mr. Raja Haber, as well as various economic activists and businessmen.

Mr. Choucair delivered a speech for the occasion stating "the ELCIM team has worked hard for eight years now and it is a program funded by the European Union, aiming to improve the productivity and quality of the Lebanese industry". He stressed on the need to pursue this program seeing the benefits it provides to the industrial sector, as well as the experience it gained in the Lebanese market. He pointed out that "the Chamber of Beirut and Mount Lebanon sees a wide possibility to benefit from its techniques, and allow the small and medium enterprises to benefit of these techniques as well."

Mr. Choucair considered that "the support of the Chamber and its reliance on ELCIM Center is part of an integrated plan that aims to boost the Lebanese production to the international level in terms of quality and competitiveness. This, in turn, leads to the consolidation of the developed sectors able to provide employment opportunities to attract young people and prevent them from leaving Lebanon."

Dr. Frenn considered that the cooperation agreement with the Chamber is part of the strategic partnership adopted by the Institute on both domestic and international levels for years now. He also affirmed his determination to develop the relationship of cooperation between the Institute and the Chamber "especially with the new promising administration management of the Chamber represented by its ambitious President Mr. Mohammed Choucair". Dr. Frenn clarified that "IRI has been fostering ELCIM since 2005, in order to improve the quality of services provided by the Institute to its commercial and industrial community".

He noted that the hosting of an ELCIM office at the Chamber will facilitate direct communication with the Chamber's members, and stressed on specialized services for the chamber's associates' interests, and their follow up in the development of their work to improve production levels, quality, conformity to standards, vocational training, and finding financing sources.

Dr. Frenn added "through ideal industrial recruitment, we are laying the foundations for the future by contributing to improve the trade balance, increase exports, create jobs opportunities, encourage investments, complementing the work of the Lebanese government in terms of stimulating and activating the national economy.

Mr. Haber then introduced the services provided by ELCIM to the industrial enterprises, noting that "opening an office in the Chamber enables us to deal directly with the associated members, and allows them to benefit to a greater extent from our provided experiences in addressing the problems of their institutions and identifying their priorities to improve performance".

MEMORANDUM OF COOPERATION

FOR THE DISSEMINATION OF GREEN COMPETITIVENESS IN LEBANON





Signing the MoU during the national forum

01/26/2010

As an update of the environmental activism in which IRI has contributed during the year 2010, it has collaborated in organizing a national forum on "Best Available Techniques: Mechanisms for Strengthening the Green Competitiveness in Lebanon", by the Lebanese Ministry of Environment at the Movenpick Hotel - Beirut, and the Industrial Research Institute in collaboration with the Lebanese Center for Cleaner Production (LCPC), and the Regional Activity Centre for Cleaner Production in Spain. They participated in the opening session; the Director-General of the Ministry of Environment Mr. Berj Hatjian, the Director-General of the Industrial Research Institute Dr. Bassam Frenn, the Director of the Spanish Center Mrs. Virginia Alzena, the Director of the Lebanese Center Mr. Ali Yaacoub, and diplomats from the embassies of Denmark and Spain, as well as environmental experts, economists, industralists and financiers.

YAACOUR

After the national anthem, the audience stood a minute of silence to mourn the victims of the Ethiopian plane. Then the Director of the Lebanese Cleaner Production Centre (LCPC), Dr. Ali Yaacoub talked about the importance of the event aiming to develop the industrial sector under the international economic variables. He asserted LCPC's role as a constructive link between environment and industry, because the heavy environmental challenges - in their risks and impacts on people's lives and future - require a collective action adhered to by everyone in the public and private sectors. He added, LCPC aims to help the Lebanese industrialists to improve their environmental performance in modern means and methods that ensure their better economic performance. We have achieved - through injecting standards of cleaner production and enhancing green competitiveness for about 25 industrial enterprises - savings amounted at almost a million dollars per year."

ALZENA (SPAIN)

The Director of the Regional Activity Centre for Cleaner Production in Spain, Mrs. Virginia Alzena, talked about the importance of participating in the forum, which introduces the best available techniques and control mechanisms to avoid contamination in order to strengthen green competitiveness in Lebanon. It's a great honor for the Regional Activity Centre to have the opportunity to launch the Initiative of Green Competitiveness in Lebanon. For us, it is another step towards universal application of the green competitiveness culture in this Mediterranean country, and this mission falls within the heart of the Centre's function, which aims to deploy these technologies in all countries of the Mediterranean.

She explained how the Centre's headquarters in Barcelona has become, since 1996, one of six regional centers in the Mediterranean region, operating under the auspices of the United Nations Environment Programme.

FRENN

IRI Director General, Dr. Bassam Frenn, praised the the Minister of Industry Engineer abraham Dedeyan in all these challenges, based on his conviction that the loss of quality, is equivalent to non-life for industry. He focused on the creation of new frameworks that stimulate the green and environmental production required for sustainable development and for entering the markets which set tough standards and conditions on exporters.

He added, we launched with our strategic partners several initiatives to strengthen the national capacities in cleaner production through training, habilitation, education and introduction of clean technologies in the industrial enterprises that have followed these programs. We strengthened our means after IRI has become the incubator of LCPC since 2004, and the Euro - Lebanese Center for Industrial Modernization (ELCIM) since 2005. The positive results achieved are not limited to the frame of envi-

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ronmental benefits. It is through the application of these techniques, that industrialists have achieved savings in production, which help them to enhance competitiveness and to allocate these profits for applied studies and research, and look for new markets. We seek through green competitiveness to find a growing role for small and medium enterprises, pushing them to adopt the best techniques for pollution control through the application of the cleaner production methods. We, at IRI and through LCPC, are ready to utilize the potential of our experts, technicians and consultants for the service of these enterprises. ELCIM conducts economic and administrative feasibility studies, and provides the technical consultation required at this level. The relations are excellent between the Institute and the Ministry of Environment in order to preserve the environment in Lebanon, and we will collaborate together on this platform. We look forward to proceeding in this protocol to be up to the level of Euro - Mediterranean Partnership, in order for Lebanon to be among the leading countries that preserve and maintain the cleanliness and the environment of the Mediterranean basin.

MINISTRY OF ENVIRONMENT

The Director General of the Ministry of Environment Mr. Berj Hatjian has clarified the Ministry's role in the preservation of the environment and the sustainable environmental development. He pointed out that the concept of green competitiveness is based on the clean production strategy, and they are adopting the best methods and techniques available to achieve this goal. It is a revolutionary concept

that pushes industrial enterprises to adapt to its requirements in order to benefit from its positive advantages to reduce pollution rate levels and achieve savings in production.

THE MEMORANDUM OF UNDERSTANDING

During the forum, a Memorandum of Understanding was signed between the Industrial Research Institute, the Regional Activity Centre for Cleaner Production, and LCPC. The memorandum includes the establishment of a strong framework of close cooperation between the three parties in order to disseminate the culture of green competitiveness in Lebanon, through:

- The transfer of expertise and the exchange of knowledge on cleaner production to the industrial sector, particularly to the small and medium enterprises, so they can be integrated into the global economy
- The coordination and cooperation to organize a general conference on green competitiveness in Lebanon that aims to raise awareness and alert to the dangers of environmental pollution resulting from industry
- The exchange of information, and planning of visits and tours for the concerned experts
- The recommendation to take on IRI, and through it LCPC, as a good reference for the adoption of the Lebanese industrial enterprises wishing to join the green competitiveness programs
- The nomination of a Lebanese enterprises to participate in the contest of green competitiveness at the European level and win the distinction award in this field.



PUMPING THE ENVIRONMENTAL SCIENCES AT THE FACULTY OF AGRICULTURE:

COOPERATION BETWEEN IRI, LCPC & FACULTY OF AGRICULTURE AT THE LEBANESE UNIVERSITY





29 APRIL 2010

The Industrial Research Institute did not stop the expansion of cooperation at the local level to allow scientific institutions, university faculties as well as economic and industrial enterprises, to benefit from its accumulated and developed experience. Institutions aiming to achieve a broader degree of progress and be a pioneer in their field can take advantage of the Institute's laboratories which are growing in modernity year after year. In this regard, IRI concluded cooperation agreements with the Faculty of Agriculture at the Lebanese University, and the Chamber of Commerce, Industry and Agriculture of Beirut, after a previous agreement with the Zahle Chamber.

In the framework of this activity, the Faculty of Agriculture at the Lebanese University, and the Institute of Industrial Research - The Lebanese Center

for Cleaner Production, have held a meeting attended by a number of professors and students, during which the cooperation agreement was signed between them.

IRI's Director General, Dr. Bassam Frennn, talked about the combined work and the recognized priority of environmental improvement which is the basis for a sustainable development for a prosperous and bright future, and the conviction that environmental improvement is a positive economic catalyst and not vice versa. The commitment to sustainable development increases the credibility and commitment of Lebanon and its respect for international protocols that it has concluded regarding the environment such as Vienna Protocol, Montreal Protocol and others.

The Dean of the Faculty of Agriculture at the Lebanese University, Dr. Taysir Hamieh, stated that the preservation of the environment is a base of human

behavior, and it is a duty of the academic sector, in particular the Faculty of Agricultural Sciences which inaugurated the Department of Environmental Sciences, to make every effort to pump the best available scientific techniques in the university curricula, in the aim of graduating a generation with the required qualifications that is able to face the environmental risks and reach a true sustainable development for the humans.

The Director of the Lebanese Centre for Cleaner Production, Dr. Ali Yaacoub, talked about the importance of disseminating the concepts and the implementation of a cleaner production in the Lebanese University especifically the Faculty of Agriculture, which has led through its implementation in the industrial enterprises, to achieve annual savings of over a million dollars a year in industrial sectors.

He also mentioned the importance of the universities and academic sector in the awareness and dissemination of the cleaner production concepts. The conclusion of the Convention crowns the efforts made for the benefit of environment and science in Lebanon, and builds a solid bridge between the environment and the academic sector.

Then Dr. Frenn and Dr. Hamieh signed a technical cooperation agreement in the fields of scientific research and exchange of information and expertise.

Finally, Dr. Yacoub and Dr. Hamieh signed the Cooperation Agreement between the Faculty of Agriculture and the Lebanese Centre for Cleaner Production related to the commitment for a sustainable environment and economic growth. Then LCPC distributed the academic book entitled "Half is Enough: An Introduction to Cleaner Production" to all attendants.

Official Visits, Conferences, and Seminars Inside and Outside Lebanon

THE EUROLAB GENERAL ASSEMBLY MEETING IN CYPRUS

On April 13, 2010 IRI Director General, Dr. Bassam Frenn, and Laboratories Division Head, Dr. Joseph Matta attended the Eurolab General Assembly meeting in Cyprus. EUROLAB is an international association, setting it as the European Federation of National Associations of Measurement, Testing and Analytical Laboratories.

During this meeting, IRI was voted unanimously to be named an International Affiliate of Eurolab. Knowing that very few countries are International Affiliates, represented by IRI, Lebanon is the only Middle Eastern country to join Eurolab.

Dr. Frenn presented IRI's role, activities, resources, accreditation, especially its flexible accreditation, which were the driving forces for choosing IRI.

The advantages of joining such a prestigious association include:

- Action by providing adequate means for exchange of information and experience,
- A major multi-sectorial forum for laboratory and conformity assessment services,
- Promotion of cost-effective testing, calibration, and measurement services adjusted to actual needs.







Dr. Frenn and the Eurolab President, Mr. Laurent

IRI Joins

THE INTERNATIONAL COMMITTEE FOR NON-DESTRUCTIVE TESTING

JUNE 10, 2010

The Lebanese Industrial Research Institute has received an international consensus that gave it the privilege to join the highest international organization for Non-Destructive Testing.

During his mission to the tenth conference for the European Federation for Non-Destructive Testing in Moscow, the Director General of the Industrial Research Institute Dr. Bassam Frenn, accompanied by the Lebanese Welding Center Division Head, Mr. Tarek Hakim, received a certificate by the International Committee for Non-Destructive Testing (ICNDT) general assembly welcoming IRI as a member of ICNDT. Welding processes for metallic structures, buildings, and tanks are subject to these non-destructive tests in order to expose any faults.



Dr. Frenn Receiving IRI's Membership Certificate

Dr. Frenn informed the Minister of Industry, H.E. Mr. Abraham Dedeyan about this accomplishment, emphasizing that having an international presence in the field of technology transfer and acquiring of the advanced scientific expertise is an integral part of IRI's development policy.

H.E. Mr. Dedehyan expressed his backing for these objectives, pledging his support for IRI, its activities as well as its future plans, while stressing the importance of adopting international standards to ensure public safety by avoiding the dangers that can result from poor welding.

The Director General of the Industrial Research Institute insisted that the acquired expertise will not remain among IRI engineers and assured its dissemination through specialized training sessions to be organized by the Lebanese Welding Center, a very important center in IRI.

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IRI PARTICIPATES IN THE 7TH SITTING OF HQE ASSOCIATION IN AVIGNON



TThe Industrial Research Institute does not limit the expansion of its environmental interest to the cooperations with national or global institutions, but goes beyond that to international "climates" which knowledge and science overstep what was known.

In this frame, the Director General of the Industrial Research Institute Dr. Bassam Frenn participated in the 7th Sitting of HQE Association entitled "Landscape and build: The revolution!" organized in Avignon - France, mid December 2010.

Dr. Frenn delivered his speech during the opening ceremony, focusing on his future vision in this field and highlighting the projects and actions undertaken by the IRI team to achieve sustainable development. He stated "benefiting from the available opportunities is our goal, and letting the future generations inherit the best life conditions is our duty. It is for these reasons that we were the first in Lebanon to introduce the concepts of sustainable development in 1999. Since then, through the considerable efforts we have made, Lebanese politicians are beginning to seriously

address the problem; the government is committed to a 12% reduction of greenhouse gas production by the year 2020. Meanwhile enormous efforts must be devoted to achieve such a goal, especially in the absence of any reliable means for monitoring and data analysis, even though the emissions of Lebanon do not have a real effect on the aggregate global data.

Aménager et construire : la révolution !

or www.poolshipe.org

In all cases, we initiated several actions at IRI and taken measures to promote sustainable development, focusing on opportunities to use renewable available energies".

He continued: "Our future vision in this field is to provide our customers and partners with complete solutions, ranging from simple tests on materials and products, inspection and certification, to management through sustainable development. In this scheme, we consider our national and international partners as our assets to overcome the challenges we face in Lebanon. This vision does not stop at the Lebanese borders, but seeks to spread throughout the Middle East, and why not beyond that?"

A VISIT TO FRANCE TO STUDY SPECIALIZED MEASUREMENTS:

SPECIAL CERTIFICATES FOR GREEN BUILDINGS





The Schneider Building which is awarded the HQE Certificate

In April the Director of Technology and Development at the Industrial Research Institute, Dr. Imad Hajj Chehade, and the Head of the Department of Specifications, Standards and Certification, Engineer Antoine Faycal, made a field visit to the Center of Scientific Techniques for Buildings (CSTB), with which the Institute had signed an agreement of cooperation regarding the issuance of certificates for green buildings, based on calibration operations related to certain measurements (rating system).

The visit included a number of institutions, among them: the CSTB and Certivéa which specializes in buildings of services characteristics, and QUALITEL specialized in residential buildings, in order to discuss the Lebanese system of evaluation and the extent of its conformity with the international regulations. The visit had a significant impact on the Lebanese rating system of evaluation, done by IRI. A visit was also organized to the Schneider building in the suburbs of Paris, which has an HQE certification, and is considered to be a typical model in terms of green building and its management techniques.

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THE NINTH MEETING OF THE EURO - MEDITERRANEAN

WORKING GROUP SPECIALIZED
IN STANDARDS, TECHNICAL REGULATIONS AND CONFORMITY ASSESSMENT



The Technology and Development Director at IRI, Dr. Imad Hajj Chehade participated in the ninth meeting of the Euro - Mediterranean Working Group specialized in standards, technical regulations and conformity assessment, which was held in Brussels on 12 July, 2010 to evaluate what has been attained by the States participating in the Action Plan that aims to create a free trade zone.

The Chairman of the meeting, Mrs. Sofia Mendez Albaran, praised the efforts made by the participating countries regarding the implementation of the Action Plan, noting that there is significant cooperation between the countries in terms of progress for this Action Plan.

As for Lebanon, Dr. Chehade said that the action plan achieved by the Commission of the ACAAs

agreement has been in the hands of the prime minister for months, but some related activities have been completed including: the adoption of European specifications related to the three fields approved in the Committee of ACAAs, namely: building materials (CMD), compressed containers (PED), and light frequency (LVD).

Draft laws have been prepared related to Metrology and conformity assessment.

The Chairman of the meeting has encouraged the participating countries to intensify efforts, where the European Union will remain ready to complete the technical assistance. The tenth meeting was decided to be held in the last quarter of 2011.

THE 11TH MEETING

OF THE COORDINATION COMMITTEE FOR IN-DUSTRIAL RESEARCH CENTERS IN THE ARAB COUNTRIES

12-13 DECEMBER 2010

IRI participated in the 11th meeting of the Committee of Coordination for the Industrial Research Centers and Institutions in the Arab States in Amman-Hashemite Kingdom of Jordan, through an invitation by the Arab Industrial Development and Mining Organization AIDMO, in the presence of the following:

Industrial Research Center – Great Jamahiriya, Industrial Research and Consultancy Center – Republic of Sudan, King Abdul Aziz City for Science and Technology – Kingdom of Saudi Arabia, Public Authority for Industry – State of Kuwait, National Centre for Scientific and Technical Research – Kingdom of Morocco, Industrial Testing and Research Center – Syrian Arab Republic, Ministry of Energy and Industry – State of Qatar, Ministry of Industry and Minerals – Iraq Republic, Iraqi Fund for Sponsoring Scientific Research – State of Qatar, Gulf Organization for Industrial Consulting – State of Qatar, Higher Council for Science and Technology – Hashemite Kingdom of Jordan, Royal Scientific Association – Hashemite Kingdom of Jordan.

The Committee discussed its agenda and came up with the following recommendations:

- The mechanisms of activating the work of the Committee of Coordination are:
 - Create a networking site in AIDMO between the Centers and Institutions of Industrial Research in the Arab States on one hand, and between each one of them and the industrial enterprises on the other hand, to increase the effectiveness of corporate strategy

- Suggest a clear annual work program which the members of the committee participate in its elaboration, and request the organization to follow-up its implementation with the committee members.
- Design and develop a questionnaire to monitor the realities of the centers and institutions of industrial research in Arab countries under the auspices and supervision of AIDMO
- The centers and institutions of industrial research, members of the Committee shall notify AIDMO of the events (such as: conferences, seminars, workshops...), which they intend to implement with a view to make them known to the concerned Arab parties to participate in
- Working to provide some successful experiments and their applications that were displayed at the center of the Arab strategy for scientific and technical research and innovation, including:
 - The Qatar Fund for National Research Sponsorship
 - The Counseling and Industrial Research Center in the Republic of Sudan
 - The National Authority for Scientific Research in Great Jamahiriya

These bodies shall send their previous experiences to AIDMO to circulate them to Commission members.

Hosted by the National Centre for Scientific and Technical Research, at the Kingdom of Morocco, it was decided to hold the Twelfth Meeting of the Committee of Coordination for the Industrial Research Centers and Institutions in the Arab States, in Rabat in 2011.

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RECYCLING & RECLAMATION WORKSHOP FOR OZONE-DEPLETING REFRIGERANT GASES







In the framework of the setup of a recycling and reclamation program for ozone-depleting refrigerant gases at the Industrial Research Institute, two IRI employees were invited by the French Development Agency in cooperation with the Ministry of Environment to attend a workshop in Düsseldorf, Germany. Mr Halim El-Bayeh and Sheikh Talal Zaki traveled on December 19, 2010 to attend the workshop organized by the international expert Mr. Rolf Rühren.

The workshop featured theoretical training on the various aspects of a refrigerant recycling program, safe refrigerant handling, and different equipment used in the framework of such a scheme. The program also included a visit for the RCN recycling plant in the city of Goch which undertakes cleanup operations for refrigerant gases in preparation for further breakdown in another facility. The visit provided the opportunity to discuss various aspects related to the safe transport and disposal of refrigerant waste.

IRI DEFINES THE CONCEPTS OF WELDING

> ANNUAL GENERAL ASSEMBLY OF IIW

The head of the Lebanese Welding Center at IRI, Engineer Tarek El-Hakim, participated in the Annual General Assembly of the International Institute of Welding (IIW) held in Istanbul – Turkey from 10 to 18 July, 2010 in the presence of representatives from most of the states acceding to IIW.

Mr. El-Hakim participated in the activities of functional commissions related to the International Institute of Welding where they presented the latest welding technologies and their applications, in particular the non-destructive tests and the recent world specifications in this field. He also participated, on the sidelines in the General Assembly of the International Conference where they displayed the latest tests and applications related to welding, as well as exchanged experiences in this field.

> 10TH MECHANICAL WEEK





On the local level, Engineer Tarek El-Hakim participated as a lecturer on the third day of the "Tenth Mechanical Week" activities which was organized by the branch of Mechanical Engineers at the Engineers Syndicate of Beirut end of October through first November 2010, where he gave a lecture entitled "Welding: testing and certification", as he introduced to the audience the potential available in the Institute, which is designed to meet the needs of all sectors, especially those related to industrialists, and

the extent of benefit from the Institute's expertise in the field of welding, the Institute being a member of the International Institute of Welding (IIW) and of the International Committee for Non-Destructive Testing.

He reminded the attendance of the decree law number 423 dated 06/06/2002 which nominates the Industrial Research Institute as the adopted donor, empowered to issue certificates of conformity in different types of welding in Lebanon.

TECHNOLOGY HAS BECOME THE FIRST NEED OF THIS ERA

WORKSHOP FOR KNOWLEDGE-BASED INDUSTRIES









20-21 APRIL 2010

The Industrial Research Institute continually affirms its presence in the scientific field through the specialized forums, seminars and workshops that it organizes for the production sectors in order to contribute to their future development. It focuses on scientific progress and innovations to improve industrial production, protect consumers, preserve the environment, achieve sustainable development, serve society's development and improve its revenues. During 2010, IRI contributed particularly in workshops that address the development of knowledge-based industries, the importance of technology, and the promotion of green competitiveness.

In this frame, IRI in coordination with the Arab Industrial Development and Mining Organization organized the national workshop on Knowledge-Based Industries. Among the participating counties were Saudi Arabia, Egypt, Syria, Jordan, Kuwait, Qatar, UAE, Morocco, Algeria, Iraq and the Sultanate of Oman, as well as representatives from the Lebanese Ministry of Industry, IRI, and ESCWA. This workshop was under the auspices of the Minister of Industry, Mr. Abraham Dedeyan.

SPEECH BY IRI'S DIRECTOR GENERAL, DR. BASSAM FRENN

In his speech, Dr. Bassam Frenn stated the following: Needless to say that the human transition from the industrial era which required physical labor to the era of knowledge-based industries, which relies on intellectual effort, has become the 21st century's theme, seeing the vast prospects of those industries, their diversity, and their penetration to the thought perceptions and scientific forecast potential.

As global "intellect" accelerates in innovating and competes in its diversity to achieve the most recent innovations, this cannot be realized nationally without support for the public and private sectors to pave the way for innovative scientific minds. For this reason, they allotted their international laboratories' technical and financial capabilities, and have provided for them the capable human minds. The main concern of these laboratories was to take the international lead, not only in terms of the innovations they are offering, but in terms of the quality and relevance of these innovations.

Dr. Frenn added, these laboratories – that account for less than 3 percent of the states' budget in the developed countries as well as in emerging ones, such as China, India, Russia and others – constitute the oases of Knowledge-Based Industries.

If the world crisis has reduced the expenditure on the industry laboratories in many states, China has offset the global downturn by giving 582,000 invention patents in 2009, while the United States did not exceed 190,000. A quarter of the Chinese patents is given for new innovations, while the remaining three quarters are renewals and improvements for old patents. The private sector has participated by 52.5 percent out of the total Chinese innovation patents. The weight of the whole Middle East region does not exceed 1.7 percent in terms of global scientific publications, and one percent in the European patents request, where the future investments in it did not exceed 10 million Euros (\$ 14 million).

He pointed out that the invitation's introduction to this workshop has stated the growing demand for knowledge and information technology as an inevitable agent for integration in the new system of economy, "and this increasing demand in the region is based on the importing and use of knowledge technologies, while looming in the horizon a predisposition to configure scientific metropolis that adopt the knowledge sciences and their economical diversity in industry and other fields. But what these Arabian metropolis are lacking is not only the funding which is the underlying motivation for innovation achieve-

ments, but also working to attract the Arab innovative brains abroad."

He considered, "that the significant objectives of this workshop and its axes must take into consideration the importance of bringing back theses minds to their mother land and prepare comfortable work atmospheres for them, and guarantee them complete freedom for their scientific aspirations.

SPEECH BY MOHAMMAD EL-CHAOUCH

The Assistant Director-General of the Arab Industrial Development and Mining Organization, Mr. Mohamed Chaouch, spoke about the competitive advantages that no longer depend - as they used to in the past – on traditional factors of production such as capital, work, land and location. On the contrary, the scientific knowledge factor has become the mainstay in the production system, and its contribution has reached 70 percent of the estimated added-value in the products of the industrialized countries, and based on statistical data, the volume of expenditure of the European Community on research and development in 2007 has reached approximately 229 billion dollars, representing the proportion of 1.85 percent of the European GDP (Eurostat 2007). According to the same sources, about 40 percent of European enterprises are active in the field of inventing.



From the left: Mr. Faisal Hassan Issa, Mr. Mohammad El-Chaouch, Dr. Bassam Frenn, and Dr. Abed Al Sater Taii

SPEECH BY ENG ABRAHAM DEDEYAN

The Minister of Industry Mr. Abraham Dedeyan considered that discussing the issue of Knowledge-Based Industries, refers to the importance of interaction and coordination of joint efforts in order to achieve a qualitative leap in studying the needs of the Arab, European and world markets, and developing the capacities to meet these needs, while preparing the research institutions and research centers to raise their ability to face challenges, pointing out that innovation and development are the primary pillars in the future of knowledge-based industries. Technology has become the first era's need, and a primordial key to improve competencies and apply skills. He explained that the Ministry of Industry's policy is based on strengthening the applied and research functions of the Industrial Research Institute, and at the level of making it a natural incubator for improving the enabling environments and encouraging projects for the industrial and innovative initiatives and contributions. He stressed that this role should contribute greatly in securing the industrial progress required to establish the economic and social stability that we are striving to achieve on a strong and solid basis. He declared to put the status of priority in the development of small and medium enterprises, particularly in technology industries, and to help the industrialists who wish to expand their business and improve their products in order to meet the international standards and specifications.

After the discussion it was agreed on the following recommendations: To urge universities, Arab research centers and scientific cities on the following:

- Networking with each other and link with specialized organizations such as the Arab Industrial Development and Mining Organization, the Scientific Research Councils Union, and the ESCWA Technological Center to be established in Jordan
- Support the establishing of centers for technology transfer and business incubators and private offices for marketing the output of scientific research through intellectual property protection and new registration for Innovation Patents and marketing
- Intensification of training sessions to improve creativity and marketing skills for researchers, with a focus on deepening the culture of continuing education
- Support the production of computer software applications using the Arabic language
- Encourage the relevant bodies and organizations concerned with supporting industry and commerce, as well as business associations, in order to create Arabic alliances interface with the support of the local investment promotion agencies, which aim to increase the size of the investment-projects share in knowledge-based industries with added quality
- Urge the Arab governments to support infrastructure for the creation and development of knowledge industries in its areas of excellence
- Encourage Arab governments to establish national monitors for sciences, technology and innovation in the Arab countries that adopt international standards in statistics, indicators, and outputs and the training of the necessary personnel to manage it. "

ESTABLISHING A DATABASE OF THE LEBANESE INDUSTRY







Mr. George Khoury and Mr. Mohammad El-Chaouch during the seminar

The Industrial Research Institute hosted a seminar on the development of the industrial information sector, entitled: "The latest information technology and its effects on the development of Arab industrial products".

The Seminar was organized by the Arab Industrial Development and Mining Organization (AIDMO) in collaboration with the Ministry of Industry.

Among those attending were the deputy Minister of Industry, and head of Economic Studies and Industrial Development in the Ministry, Mr. George Khoury, the Assistant Director General of AID-MO, Mr. Mohamed El-Chaouch, representing the Director General Mr. Mohammed Bin Yousef, the

representative of the Islamic Development Bank, Mr. Hilal Hussein, as well as representatives of various Arab countries.

Mr. Khoury announced that the ministry is preparing a survey to establish an industrial database built on the updated data collected about the industrial reality and its contribution rate in the GDP and the job opportunities it provides.

Mr. Khoury stated in his speech that "this seminar is an essential step in the process of Arab economic integration, designed to support scientific cooperation between the Arab countries in the development of the industrial information sector, and to get to know the reality of industrial information within it."

THE JOINT COMMISSION FOR WORK DEVELOPMENT HELD AT IRI

A LEBANESE - SYRIAN AGREEMENT TO UP-DATE THE LISTS OF EXCHANGED COMMODI-TIES AND TO ADOPT THE STANDARDS AND DECREASE CUSTOMS IMPEDIMENTS

Based on the Mutual Recognition Agreement between Lebanon and Syria on Conformity Certificates, which was signed on February 02, 2000, and in coordination with the General Secretariat of the Syrian - Lebanese Supreme Council, the Commission for Work Development within the process of granting Certificates of Conformity, held a meeting at IRI headquarters in Beirut, Lebanon.

Representing the Syrian side were:

Director-General of the Chemical Organization for Standardization and Metrology, Mr. Wafik Jerdi, Director of the Quality Department at the Chemical Organization, Mrs. Diaa Massaad, Public Relations Responsible in the Organization, Mr. Khaled al-Khatib.

Representing the Lebanese side were:

Industrial Research Institute

Director General, Dr. Bassam Frenn, Administrative and Financial Director, Mr. Sélim Kfoury, Assistant Director General for Relations with Public Administrations, Engineer Maroun Saikaly, Development and Technology Director, Dr Imad El-Hage Chehade, Applied Research and Testing Director, Ms. Nadia Khoury, Standards, Metrology and Certification Division Head, Engineer Antoine Fayçal, Testing and Engineering Consultancy Division Head, Engineer Elias Dib, Head of Laboratories, Dr. Joseph Matta, Coordinator of European and International Programs, Mr. Naji Abi Zeid, Unit Head for

the Center for Documentation and Publications, Engineer Siham Youssef, Public Relations Officer, Mrs. Nancy Maalouf.

Lebanese Institution for Standards

Acting Director-General, Engineer Lena Dergham.

Lebanese Customs

First Controller, Mr. Imad saad, First Controller, Mr. Neemat El Brax.

The meeting was attended by the General Secretariat of the Syrian-Lebanese Supreme Council, in the person of Mr. Samih Joumaah.

The Committee first discussed the updating of the list of commodities exchanged between the two countries, given the changing patterns of exchanged goods as well as their quantities and regulations, and the occurance of new related updates. It was agreed on the need to update the list of exchanged goods. Both customs authorities were asked to provide to the Syrian-Lebanese Supreme Council a list of the exchanged goods during 2009 and 2010, so they can be circulated to the stakeholders concerned in the meeting, in order to work on its development through the specifications' harmonization of the most exchanged commodities according to their priorities.

Since both the Syrian Organization for Specifications and Standards and the Lebanese Institution for Standards and Specifications derive the specifications of goods that they adopt, from almost the same inter-





national references, and seeing the evolution of the number of approved specifications and its growing in both countries; it was agreed to exchange a list of the currently available specifications for both sides in a detailed form. Therefore, each party has to inform the other one about the adopted specifications successively in a direct contact and a follow-up of the interactive sites for each one of them. And it was decided to complete a list of the exchanged specifications every six months, and review the procedures for the harmonization of these standards.

The two parties studied the obstacles preventing the implementation of the convention on mutual recognition of the conformity certificates signed by both countries on 02/10/2000 optimally. It was agreed on the recommendation of the General Secretariat of the Syrian-Lebanese Supreme Council, to address the concerned authorities in Syria in order to apply all the provisions of the convention regarding the materials holders of Import Approvals, including those covered by the Control Program on Imports, in order not to repeat the laboratory tests on them at the border ports in case they hold a conformity certificate.

To review the measures implemented in the granting of certificates and verification, it was agreed, on the following:

The necessity to show the adopted standard in the body of the Certificate of Conformity, and

- justify it in a clear way, in case of absence of specification for the concerned commodity in the country of import
- The continuation to adopt the lists of goods and materials (commodities) in accordance with their sectoral classification
- To re-confirm what was agreed upon in the previous meetings concerning the approved specifications of the items for which there are no specifications by any party, so that to adopt international, regional, Arab or local available standards. However if a specification of the commodity was available at one party without the other, it will be adopted by both parties.

It was agreed to exchange copies of the Certificates of Conformity granted to the commodities exchanged between both countries, and this between the Syrian Organization of Specifications and Standards, and the Lebanese Industrial Research Institute, respectively.

The two sides have discussed the technical experiment results obtained from the application of the Control Programs on Imports, as well as the results of the Lebanese experience with the international control companies.

It was decided to hold the next meeting of the Commission at the headquarters of the Syrian Organization for Specifications and Standards in Damascus.

THE ENVIRONMENT:

PRINCIPLES AND SOLUTIONS

MR. RAHAL: THE CRITICAL PO-LITICAL REALITY HAMPERS MANY PROJECTS FOR US

19 OCTOBR 2010

The Lebanese Minister of Environment, Mr. Mohammad Rahal, confirmed the country's need for breakers and sanders, but not in the way it works currently. He pointed out that the mandatory decree of environmental assessment is supported in all world countries except Lebanon. Noting here that he raised the subject at the Council of Ministers' meeting, which coincided with heated political topics, hence adjourned, and the file was dragged from deliberation and is still delayed because of the current political situation. The Minister said that the issue of the environment is not a luxury but a problem of real losses, and any solution requires cooperation and assistance, whether from the state institutions, civil society or international communities.

Mr. Rahal opened "The Environment: Principles and solutions" conference, which was organized by "First Protocol" company in collaboration with Bank Audi and the Faculty of Science at the Holy Spirit University - Kaslik, at the premises of the university's faculty building. The conference was attended by the President of the Economic and Social Council, Mr. Roger Nisnas, the President of the Lebanese Businessmen Association, Mr. Camille Menassa, the President of the Insurance Companies Asociation, Mr. Abraham Matossian, and the Danish Ambassador, Yantope Christensen, representing the Minister of Energy and Water, Mr. Gabi Gebrael, Director General of Water and Electric Resources, Mr. Fadi Comair as well as representatives from the embas-



Mr. Sélim Kfoury giving a speech

sies of: France, Mrs. Marie Maamari; Jordan, Mrs. Nysreen Kassous; Kuwait, Mr. Fahd Massoud; and Indonesia, Mr. Ahmed Cioviann, and representatives of the Security Forces and Ministries of Environment and Health, and environmental associations.

The Director General of First Protocol, Mr. Maroun Balaa, pointed the conference's two primordial aims: First, to bridge the distance of work and methodology between public institutions and the private sector, and second, to urge the young generation to give their opinion regarding the environmental issues that determine their own future, calling onto university





students to get involved, stressing that awareness is a solution to half of the problem, "if awareness exists, it is easy to complete the rest."

The Dean of the Faculty of Science at the University, Mr. Naim Oweini stated that "protecting the environment is necessary and vital, and people organize meetings in this regard worldwide, which proves its importance". He also talked about the environmental project launched by the University Rector, Father Hadi Mahfouz, in July 2010, entitled "Towards a Green University for a sustainable future, a sustainable carbon-free University", which is "the first of its kind in the region."

The Administrative and Financial Director of IRI Mr. Sélim Kfoury, representing the Director General of the Institute, Dr. Bassam Frenn, spoke about the "the organic link between industry and environment," considering that "the commitment of the Lebanese Cleaner Production Centre and its close cooperation with the Ministry of Environment since 2004, is an evidence of the link between Industry and Environ-

ment and the respect of the signed agreements".

The President of the Lebanese Industrialist Association, Mr. Nemat Frem, launched an environmental appeal under the existing administrative paralysis, pointing out that with the immobilized public projects reality, a large part of the solution may be available if we release the private sector. He requested permission to generate clean electricity and link it to the network and sell it to the industrialists particularly, and to the consumers generally, according to the favorable economic feasibility of such projects.

The President of the Federation of Chambers, Mr. Mohammad Choucair, has explained the reasons behind the concerns of the economic bodies about the environment "which is related to daily life aspects", considering that the good exploitation of industries and eco-friendly products will enhance their contribution to improve the economy and create new jobs opportunities". And since the chambers of commerce form a link between the private and the public sectors, he called both sectors to take measures that

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contribute to the promotion of environmental awareness and help in finding environmental industry that promotes the economic growth.

COLLECTIVE RESPONSIBILITY

In his speech, Mr. Rahal brought up the issue of "the political stability factor which contributes to accelerate the wheel of production and pass the decrees that do activate and develop the environmental reality," he also said: "Today we are witnessing a critical political reality which hampers many projects for us". He stressed on the role of the civil society and the private sector in supporting the projects belonging to the Ministry of Environment because the budget has not been yet ratified. And even if this is done, this is a role for civilian institutions and the private sector, and everyone should assume their responsibilities, where it is not only a matter of accusing and blaming others". And he recalled the projects carried out by the ministry in cooperation with municipalities where they have planted trees in about 3 million square meters of land.

He pointed out that studies indicate the extinction of nearly 1/5 of plant types as a result of climate change in addition to its implications on snowfall quantities and skiing seasons in Lebanon.

The Recommendations: Enhancing the environment and suppressing infractions

The recommendations issued by the conference included: the promulgation of environmental awareness among students and young people, ranging from primary education stages until university level, and the inclusion of the environmental education mate-

rial course in the education curricula. To develop an overall strategy for the exploitation of natural resources in the production of electrical energy such as water, sun and air to limit the use of energy-producing fossil fuels (oil and gas products).

It is also recommended to necessitate research on each new product in order to monitor the size of the environmental damages resulting from its production and limit them, and the adoption of recycling waste for the production of clean industries, which provides a cost-effective multiplier on the output of factories and companies. The recommendations focused on the role of the partnership between the private and public sectors and NGOs in the field of sustainable development in order to reach a clean environment for the benefit of the future generations, and the regain of balanced growth to improve the environment. To involve the civil society and private and public institutions in environmental projects (afforestation, recycling...), and the protection of green areas, and the afforestation of the rest through the establishment of public parks and nature reserves.

It hoped the establishment of industrial cities friendly to the environment in villages and rural areas in order to reduce the migration of labor, process infrastructure, and take care of the urban organization reality, and that the banks give facilitating loans to help citizens to invest in environmental projects.

It said to establish the environmental control program for the suppression of irregularities and the emphasis on sanctions against violators.



FOOD SAFETY MANAGEMENT 22000 (AFNOR)

27 MAY 2010

IRI participated in a webinar, (online seminar) presented by "AFNOR", about the new Food Safety Management Standard FS 22000 (FSSC: Food Safety management System for Certification).

FS 22000 differs slightly from ISO 22000:2005 (Food Safety Management System requirements for any organization in the food chain); while the ISO standard applies to all organizations in the food chain, from the farm to the food packaging producer, FS 22000 applies only to food manufacturers and is recognized by the Global Food Safety Initiative (GFSI).

GFSI was launched in May 2000; it provides convergence between Food Safety Standards and establishes a benchmarking process for the different Food Safety Management Systems, to ensure confidence in the delivery of safe food to consumers.

The GFSI benchmarks, besides FS 22000, four food safety schemes: BRC (British Retail Consortium), IFS (International Food Safety), Dutch HACCP (Hazard Analysis and Critical Control Point) and SQF (Safe Quality Food institute), that are accepted by major food retailers such as Carrefour and Wal-Mart.

The FS 22000 scheme requirements are made up of the ISO 22000:2005 standard and the PAS 220:2008 (Publicly Available Specification).





PAS 220:2008 is a document that was developed by BSI; it supports management systems designed to meet—the requirements for Prerequisite Programs (PRP) specified in ISO 22000 and applies to all who are involved in the manufacturing step of the food chain.

Based on PAS 220, ISO has published a technical specification ISO/TS 22002-1:2009 (PRP on Food Safety, Part 1 – food manufacturing) to assist companies in designing and implementing PRPs.

The FS 22000 certificate is valid for 3 years. Note that certification audits focus on both ISO 22000 and PAS 220 requirements and the selection of the auditors will be done according to ISO/TS 22003:2007 (Food Safety Management System requirements for bodies providing audits and certification of FSMS).

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SCIENTIFIC TRAINING





MANAGEMENT, ANALYTICAL TRAIN-ING AND TECHNICAL REQUIREMENTS FOR THE COMPETENCE OF TESTING

The Department of Applied Research and Testing at the Industrial Research Institute offered training courses on:

- Management and technical requirements for the competence of testing including method validation and uncertainty of measurement
- Microbiological Training for cosmetic products, detergent and baby diapers
- Analytical training including standardization, gravimetric, titrimetric and instrumental techniques for cosmetic products, detergent and baby diapers

Attending these courses were chemists and microbiologists from the Central Laboratory and Quality Control Laboratories - Ministry of Planning, Kurdistan Regional Government, Iraq.



The training courses began with scientific sessions of lectures in the field of analytical testing, the Quality Management System, the implementation of ISO 17025. Case studies and good laboratory practices were also discussed.

In the practical testing part, the trainees then headed to the laboratories to perform the necessary tests according to the International Reference Methods. The trainees were divided into two groups, chemical and microbiological, for more specialized training.

GAP ANALYSIS

The Department of Applied Research and Testing at the Industrial Research Institute performed gap analysis as per ISO 17025:2005 at the Chambers of Commerce, Industry and Agriculture of Zahle, Saida, as well as the Microbiology Laboratory in LARI Fanar. The objective was to identify the needs towards ISO 17025 accreditation of the analytical laboratories, through conducting a gap analysis which is done in comparison with ISO requirements.

TRAINING SESSION

FOR SPECIALISTS FROM THE KURDISTAN REGIONAL GOVERNMENT - IRAQ

The Metrology Laboratory at the Industrial Research Institute has conducted a training session between the 20 and 23 of December 2010 which addressed the following topics:

- Methods of scales calibration
- Methods of blocks calibration
- Measurement of uncertainty

The session was attended by engineers from the Central Laboratory and the Quality Control Laboratories of the Ministry of Planning in the local government of the Kurdistan county of Iraq.

The session included scientific lectures on quality management system and the ways of applying the system of ISO 17025. While in the applied part the trainees have made a calibration of some blocks and scales in accordance with the international standard specifications.

At the end of the session, the participants expressed their desire to join other courses related to calibration, or other activities undertaken by the Institute.







The participants recieving their certificates



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TRAINING SESSION IN THE FIELD OF:

NON-DESTRUCTIVE TESTING IN INDUSTRIAL RADIOGRAPHY - SUDAN



Mr. Khodr Fawaz has participated - from the Lebanese Center for Welding at the Industrial Research Institute - to the training course in the field of non-destructive testing in the industrial radiography - first level, which was held in the Sudan's capital El-Khartoum, from April 24 to 29, 2010, in cooperation with the Arab Atomic Energy Agency and the Sudan Atomic Energy Commission. They participated in the session experts from various Arab countries as Sudan, Lebanon, Iraq, Syria, Jordan, Saudi Arabia, Tunisia and Libya.

It should be noted that Mr. Fawaz occupied the second rank in the final exam order done at the end of the session, and he briefed also on the latest welding technology and its application, particularly the non-destructive tests on welding.





Mr. Fawaz recieving his certificate as second place winner

IRI, ESCWA & LSES ORGANIZED

TRAINING COURSES FOR THE MANUFACTURE OF WATER HEATERS ON SOLAR ENERGY







As an update for the joint agreement - between the Industrial Research Institute on one hand, and the Economic and Social Commission for Western Asia (ESCWA) and the Lebanese Association for Solar Energy (LSES) on the other hand - which purpose is to organize six training courses related to the manufacture of water heaters on solar energy for a three-year-period starting from 2009, the Institute has therefore organized two new training courses in 2010: the first was for three days long and included the how to make the device and install it in theoretical and applied methods, given by the Lebanese Association for Solar Energy, and another five-daycourse that included the content of the first course in addition to a training in copper welding, given by the Lebanese Center for Welding at the Institute.

The session program included a theoretical and practical training, where the President of the Training Unit in the Lebanese Center for Welding Mr. Taher Wehbe has given, on the first day, a comprehensive theoretical training on all methods of welding in general, and focused his lecture in particular on the welding of the impurities that may result from mis-welding.

And on the second day, Mr. Tahir Wehbe has prepared samples related to copper welding, and has focused on giving the participants practical training on the welding operations related to solar heater. On the third day, Mr. Nader Al Hajj Shehadeh has explained how to calculate and manufacture the solar heater.

Engineer Jean-Paul Sfeir has prepared on the fourth and fifth day, a sample of the solar heater mirrors, as well as their assemblage and installation process with the participants, and has explained to them the stages of manufacturing in order to obtain mirrors with their ready test method.

The first extended session has welcomed 14 participants and the second limited session, 17 participants who were divided between the industry, education and private sectors, with a remarkable participation of the Lebanese Army, which assigned five soldiers for the two sessions, noting the continuous cooperation between the Institute and the Lebanese Army Command.

ESTABLISHING A LAB FOR CHECKING THE MIRRORS OF SOLAR WATER HEATERS

The Institute is currently collaborating with the Lebanese Center for Energy Conservation, to prepare a laboratory for solar mirrors' checking which is considered to be the first of its kind in Lebanon, after it received a donation from the Greek Government to equip the laboratories with the latest modern test devices. The Institute has supervised technically, in coordination with the Lebanese Center and the Greek Embassy, the offers submitted for the tender to provide the test equipment devices. The laboratory was officially opened on the 31st of March this current year.



THE INSTITUTE SEEKS TO BROADEN THE SCOPE OF INTERNATIONAL ACCREDITATION

Assessors from the German Accreditation Body (DAkkS) carried out a surveillance visit at the Institute in December 2010 in order to assess the accreditation status granted to the institute since 2004 according to the International Standard (ISO 17025): During this revisit, the accreditation status was confirmed and ten new testing methods were covered (electrical and chemical methods).

The accreditation scope covers 307 testing methods in the microbiological, chemical and physico-chemical, wheat and grain as well as electrical fields.

The Institute seeks on the short and long terms to expand the current scope of accreditation and obtain an international accreditation in other fields as detailed in the following table:



Item / Field	Activity / Test	Standard
-Compact Fluorescent Lamp -Home Appliances -Visual-Audio device	Electrical tests	ISO 17025
-Mass & Scales	Metrology	ISO 17025
-Cement -Tiles	Civil Engineering tests	ISO 17025
-Gas bottles -Oil and Fuel Pipes -Steam Boilers	Inspection and Auditing	ISO 17020
-All products	Product Certification	ISO Guide 65
-Welding and non-destructive testing	Personnel Certification	ISO 17024



NEW ANALYTICAL SERVICES

New analytical methods at the Industrial Research Institute have been accredited by the German DAKKS accreditation body (Deutscher AKKraditierungs Services).

THESE ARE IN THE FIELDS OF:

ISO 5983 (1997)	Animal Feeding stuff- Determination of nitrogen content and calculation of crude protein content – Kjeldahl method
ISO 7888 (1985)	Water quality – Determination of electrical conductivity
IT-me/CHI/02 (2009)	Analysis of saturated, unsaturated fatty acids and trans fatty acids
ISO 6887-5 (2010)	Microbiology of food and Animal feeding stuff – Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 5 : specific rules for the preparation of milk and milk products

FLEXIBLE ACCREDITATION

It is important to note that the accreditation body confirms that the IRI laboratories are competent under the terms of DIN EN ISO/IEC 17025:2005 to carry out the flexible accreditation. It is the highest level of the accreditation. In fact, without prior information and approval by DAP German accreditation system for testing, the laboratory is permitted to use standard test methods or test methods equivalent to them which are not included in the certificate.

INTERACTION WITH ANALYTICAL ORGANIZATIONS

Our laboratories interact with various scientific institutes around the world in an interlaboratory or proficiency testing activities as follows:

- Bread laboratory proficiency testing with Bipea Cofrac / France in flour
- Chemical proficiency testing with FAPAS Central Science Laboratory (CSL) / UK and Swedac / Sweden - Food products
- Microbiology proficiency testing with Norsk Matanalyse / Norway in water and food.



IRI PARTICIPATES IN:

PROJECT LEBANON 2010





The Industrial Research Institute participated in the Project Lebanon exhibition in BIEL between the 1st and 4th of June 2010. The Institute had a special wing at the exhibition in its Green Pavillion, where IRI personnel distributed its various publications to the visitors, and displayed a film about the different phases it has witnessed since its inception, up until it moved to its new headquarters in the Lebanese University Campus in al-Hadath in 2004.

Several of the Institute's laboratory workers and administrators were available in its wing at the exhibition, and briefed the participants on the services provided by the Institute.

BUSINESS OPPORTUNITIES IN LEBANON VIII

HORECA 2010

For the eighth consecutive year, Lebanon Opportunities in collaboration with ELCIM has organized its annual event "Business Opportunities in Lebanon" on October 19-21 2010 at the Convention Center in Dbayeh.

Company owners, Country's top manufacturers, business leaders, decision-makers, real estate developers and brokers, public works contractors, investment bankers, investors, tax specialists have attended, as well as dozens of foreign investors and businesspeople.

A series of workshops were held, topics covered included finance, marketing, human resource management, industry, banking, hospitality and tourism, information technology, real estate, general trade, and other.

ELCIM organized a workshop on "Guerrilla Marketing" on October 20 2010 where Marketing and promotion techniques for low-budget companies or those targeting niche markets were discussed. Two case studies from two different companies – Skyline design and Massada - were presented to share their business experience.

Another workshop on "Business Process Re-engineering" was held on October 21 2010. The aim of this session was to identify the core processes of an organization, measuring evaluation to strategy and designing to achieve dramatic improvements using analytic and design techniques.



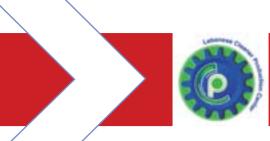
The Annual Hospitality and Food Event in the Region, the HORECA exhibition, was held at Biel, April 27-30 2010. The Exhibition hosted thousands of visitors daily who have come to learn more about the exhibitors and to take part of the various events there. These events included the "Hospitality Salon Culinaire", "Table Setting Contest", "Lebanese bartenders Competition", "Atelier Gourmand", "Oil Contest", "The Annual Hospitality Forum", "Live Junior Chefs Competition", and "Wine and beverage pavilion".

ELCIM takes part in this exhibition every year where it meets its clients and introduces them to its new service offerings. This year, the launching of The Food Advisory Unit has been the major new service which many clients were interested in.

ELCIM experts were present every day to discuss the needs of the visitors and the possibility of potential cooperation.

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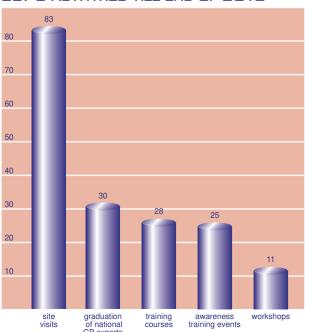
LCPC ACTIVITIES

The year 2010 was fruitful; the LCPC achieved its target and was elected in the Executive Board of the RECP Global Network to represent the West Asia countries, and in the Marrakech Process as representative of the Arab and West Asia countries, and continued to undertake its 3 core activities:

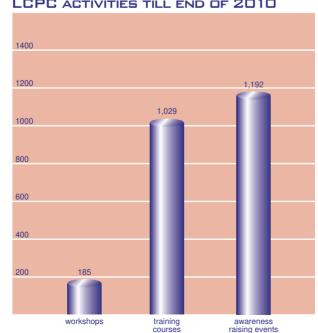
- In Plant Demonstration
- Awareness Raising
- Training and Capacity Building.

More than 147 events were organized and implemented by LCPC and targeted more than 2,406 persons. The cumulative activities achieved by the LCPC up till the end of 2010 along with the total number of participants are shown in the following graphs:

LCPC ACTIVITIES TILL END OF 2010



NUMBER OF PARTICIPANTS IN LCPC ACTIVITIES TILL END OF 2010









I. AWARENESS RAISING EVENTS AMONG THE EDUCATIONAL SECTOR

Collaboration agreement between the LCPC & Faculty of Sciences – Saint Joseph University, February 2010

The LCPC Director, Dr. Ali Yaacoub, and the Dean of the Faculty of Sciences at the Saint Joseph University, Dr. Toufic Rizk, signed a Joint Collaboration at the USJ premises on the 24th of February 2010.

Sessions to USJ and IUL Masters Students – February and March 2010

The LCPC Director held a series of training session on CP methodology to the USJ and IUL students mastering in Industrial Technology on the February and March 2010.

Iraqi Delegation in collaboration of the Islamic University of Lebanon (IUL) – April 2010

The Iraqi's Delegation from the University of Karbala in collaboration with the Islamic University of Lebanon, visited the IRI & LCPC on the 13th of April 2010.

They were introduced to Cleaner Production concept and methodology. Their visit also included a guided visit to the laboratories available at IRI.

At the end of the visit, attendance certificates were distributed to the participants.

Collaboration agreement between the LCPC & Faculty of Agriculture – Lebanese University – April 2010

The LCPC Director, Dr. Ali Yaacoub, and the Dean of the Faculty of Agriculture at the Lebanese University, Dr. Tayssir Hamiyeh, signed a Joint Collaboration Agreement at the Faculty of Agriculture premises on the 29th of April 2010.

Session to Masters Students at Lebanese University Faculty of Agriculture, May 2010

The LCPC Deputy Director, Eng. Hanan Khanafer held a training session on CP methodology to master students at the Lebanese University, Faculty of Agriculture on the 26th of May 2010.

Students were introduced to LCPC and environmental protection and familiarized with the concept and methodology of CP.

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II. IN-PLANT DEMONSTRATIONS

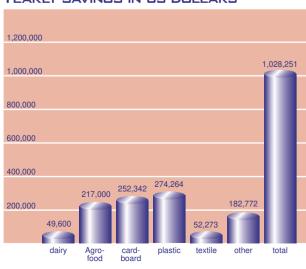
LCPC has collaborated with 31 SME's in Lebanon distributed among several industrial sub-sectors.

These sectors are:

- Dairy sector
- Agro-food canning sector
- Paper and cardboard sector
- Aluminum production sector
- Ceramic production sector
- Plastic production and recycling sector
- Textile sector
- Olive oil sector.

The CP options implemented in each SME that participated in the LCPC programmes have led to a total yearly savings of more than One Million USD.

YEARLY SAVINGS IN US DOLLARS







DISSEMINATION SEMINAR FOR TEXTILE SECTOR AND OTHERS

The dissemination seminar for the Textile sector and others was held at the IRI on the 9th of March 2010.

During the seminar, In-plant demonstrations of the Textile sector and others were presented and relative manuals were distributed to the participants. The manuals detailed the CP methodology and techniques in general and their application at the Textile SME's in particular. In addition they summarized the successful stories of the SME's that participated with the LCPC, shedding the light on the savings they achieved in energy, water and other raw materials consumption.

During the ceremony, certificates were distributed to 4 SME's from the textile sector and 2 SME's from the Agro-food sectors that applied the CP concept in their industries as well as to five CP experts that have participated in latest In-plant demonstration organized by the LCPC.





INITIAL SEMINAR AND SITE VISITS: OLIVE OIL SECTOR IN LEBANON

The Initial Seminar introduced the SME's of the olive oil sector in Lebanon to the concept and methodologies of CP and the purpose of the demonstration project and took place in the IRI premises on Wednesday 9th June 2010.

The LCPC screened and selected 6 companies from 14 applicants to undertake the In-Plant demonstration programme:

- Company Boulos for Industry and Trade
- Said Saifan Foundation
- Presses Sheikh Sleiman El Daher
- Agricultural Cooperative Association in Rashaya El Foukhar
- Badawee Olive Oil
- Presses Modern El Rashid.

After the selection of SME's, LCPC team and CP assessors undertaked site visits to collect primary data and sign the binding contract between LCPC and each of the selected SME's. These site visits took place on $22^{nd} - 23^{rd}$ of July 2010.





CP IMPLEMENTATION AT UNIPAK: PAPER AND CARDBOARD SECTOR

LCPC developed and implemented new services integrated with CP methodologies in one industry within previous sectors: Paper and Cardboard Sector.

UNIPAK: Union Packaging Corporation

This company is implementing CP methodologies and is a part of the IPA programme including site visits. The first site visit took place on 19th November 2010.

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III. TRAINING & CAPACITY-BUILDING





This activity has been targeting industrial, environmental and financial stakeholders; namely decision-makers in industrial establishments, consultants, national experts, in addition to academic and research institutions. The purpose is to build up skills not only in cleaner production but also in allied fields.

BALAMAND UNIVERSITY STUDENTS - MARCH 2010

Balamand University Students, Faculty of Public Health Sciences, taking a course on Clean Technology and Pollution Control, accompanied by Dr. Berj Hatjian, DG of MoE, visit the IRI & LCPC on the 20th of March 2010.

Students were introduced to LCPC and environmental protection and familiarized with the concept and methodology of CP. In addition, the students discussed and evaluated with LCPC team the role they could play in the dissemination and application of CP in Lebanon. Their visit also included a guided visit to the laboratories available at IRI to introduce the students to the sampling techniques and metrology.







ENVIRONMENTAL MANAGEMENT SYSTEM: ISO 14001:2004 - APRIL 2010

The LCPC and 3A Solutions s.a.r.l organized seminar on: Environmental Management System: ISO 14001:2004, which took place on Friaday 16th of April 2010 at the Industrial Research Institute – IRI, to introduce the ISO 14000 series, environmental auditing, environmental labelling, environmental performance evaluation, and life cycle assessment. These International standards are voluntary standards for the establishment of a common worldwide approach to management systems that will lead to the protection of the earth's environment while spurring international trade and commerce.

During the Seminar, LCPC with 3A Solutions s.a.r.l and Somiral s.a.r.l, signed two Memorandum of Understanding, in order to promote Environmental Management System and Sustainable Development.

WORKSHOPS TOWARDS THE ESTABLISHMENT OF THE NATIONAL CLEANER PRODUCTION CENTRE IN THE UNITED ARAB EMIRATES (UAE) WITH PUBLIC AND PRIVATE SECTOR, DUBAI, UAE - MAY 2010

The Ministry of Environment and Water in UAE invited the LCPC in cooperation with UNEP-ROWA to organize two workshops on CP towards moving





forward in the process of the establishment of the National Cleaner Production Centre (UAE-NCPC), each one for two days.

The workshops took place during the period from the 3rd till the 6th of May 2010 at Dubai, UAE.

At the end of the workshops, LCPC and UNEP prepared a recommendation paper and submitted it to the Minister of Environment and Water H.E. Dr. Rached Ahmad Bin Fahed, presenting a road map to finalize the major steps towards the establishment of the UAE-NCPC.

TRAIN THE TRAINER WORKSHOP: FOR THE OLIVE OIL SECTOR IN LEBANON - SEPTEMBER 2010

Following the site visits to the 6 SME's under the olive oil sector in Lebanon, the LCPC organized the "Train the Trainers" Workshop, and it took place at the IRI premises on the 21st of September 2010.

This workshop targeted the representatives of the SME's in addition to the selected national CP experts.

All participants were trained in CP concepts and methodologies, the CP assessment report, and informed about the following steps in the In-Plant Demonstration process in which they were participating.



CAPACITY BUILDING SEMINAR ON:
MINIMIZATION OPPORTUNITIES ENVIRONMENTAL DIAGNOSIS - MOED SEPTEMBER 2010

The LCPC in collaboration with RAC/CP in Spain and for the Promotion of Green Competitiveness, a capacity building seminar on: "Minimization Opportunities environmental Diagnosis – MOED" was organized and presented by Dr. Mohamed Ezzine, International Consultant.

The Seminar was held on the 23rd of September 2010 at the Industrial Research Institute premises.

The main objective was to:

- Provide technical assistance to SME's
- Understanding the MOED tools: definition, objectives and uses
- Calculate the profitability of CP projects
- Evaluation of the environmental benefits achieved
- Encourage the exchange of experiences and knowledge and providing examples of practical application of CP through Med Cleans
- Become familiar with the digital platform for conducting self audit online.

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IV. INVEST IN MED:

FOSTERING COMPETITIVENESS FOR SOUTH-MED PRODUCTS







OPERATION 1: WORKSHOPS ON PRODUC-ERS RESPONSIBILITY EU DIRECTIVES: REACH, ROHS AND C&L

International and National experts presented the EU directives (REACH, C&L, RoHS) to enterprises, local stakeholders and consultants who will make initial contacts with SME's in the framework of this initiative.

The participants were introduced to the Overview of the Global Regulatory Frameworks related to Chemicals Management, Clean and New Technologies for Chemicals and Chemical Waste Management in Industry, Hazard Communication: GHS-Labeling and Safety Data Sheet.

This operation is considered as the first and essential step in assisting SME's to manufacture products which are compliant with European environmental directives, and how to comply with those directives in order to learn about major export barrier and thereby gain more potential for export to the Europe market.

During the workshop, a MOU was signed between the LCPC and Federation of Egyptian Industries, Environmental Compliance Office and Sustainable Development with the aim of assisting, promoting and implementing sustainable application of Cleaner Production, Renewable Energy & Energy Efficiency in order to increase the productivity of industry and reduce risks to people and the environment in Lebanon and Egypt.

OPERATION 2: REGIONAL WORKSHOP FOR TRAIN THE TRAINERS ON EU DIRECTIVES

The international expert Dr. Helmut Fleig trained the ENCPC, CMPP and LCPC experts on the European directives.

The experts will attract local SMEs, and provide training and assistance on how to become compliant with REACH, C&L, and RoHS.

The training took place on the $20^{th} - 21^{st}$ June 2010, Cairo, Egypt.

V. GRECO INITIATIVE







GRECO is a Mediterranean initiative designed to promote green competitiveness in the region by demonstrating the fabulous economic benefit that the environment can offer companies.

LAUNCHING GRECO INITIATIVE GREEN COMPETITIVENESS IN LEBANON:

The Ministry of Environment (MoE) and the Industrial Research Institute (IRI) in collaboration with the Lebanese Cleaner Production Center (LCPC) and the Regional Activity Center for Cleaner Production in Spain (RAC/CP) organized the National Forum on:" Best Available Techniques: Mechanisms to enhance the Green Competitiveness in Lebanon" and it took place on Tuesday 26th of January 2010 at the Movenpick Hotel, Beirut, Lebanon.

During the forum, IRI, LCPC, and RAC/CP signed a Memorandum of Understanding valid for three years, and agreed on setting up a strong cooperation framework between them in order to promote the GRECO Initiative among companies in Lebanon.

AWARENESS SEMINARS ON GREEN COM-PETITIVENESS

On the purpose of disseminating the Green Competitiveness concept, the LCPC in collaboration with RAC/CP Spain held a series of awareness seminars on green competitiveness – GRECO program which tackled mainly the industrial sector in Lebanon in order to select 5 companies to execute Case Studies in Lebanon.

During the seminars, the participants were introduced to CP concepts and methodologies, Green Competitiveness – GRECO Initiative in Lebanon.

The first seminar took place on the 24th of June 2010, at the IRI premises, the second one was organized on the 25th of August 2010 in Hasbaya, South Lebanon, the third was organized on the 23rd of November 2010 in Zahleh, Bekaa, West Lebanon.





INITIATIVES FOR 2010

BUSINESS OPPORTUNITIES IN LEBANON VIII

For the eighth consecutive year, Lebanon Opportunities in collaboration with ELCIM has organized its annual event "Business Opportunities in Lebanon" on October 19-21 2010 at the Convention Center in Dbayeh.

Company owners, Country's top manufacturers, business leaders, decision-makers, real estate developers and brokers, public works contractors, investment bankers, investors, tax specialists have attended, as well as dozens of foreign investors and businesspeople.

A series of workshops were held, topics covered included finance, marketing, human resource management, industry, banking, hospitality and tourism, information technology, real estate, general trade, and other.

ELCIM organized a workshop on "Guerrilla Marketing" on October 20 2010 where Marketing and promotion techniques for low-budget companies or those targeting niche markets were discussed. Two case studies from two different companies – Skyline design and Massada - were presented to share their business experience.

Another workshop on "Business Process Re-engineering" was held on October 21 2010. The aim of this session was to identify the core processes of an organization, measuring evaluation to strategy and designing to achieve dramatic improvements using analytic and design techniques.

LAUNCHING OF THE FOOD ADVISORY UNIT

ELCIM, on behalf of IRI, and as a specialized business services provider, is eager to serve the Agro-food manufacturing SMEs. As a result, it has worked on setting up an extensive Food Advisory Unit whose role is to advise, guide and eventually implement food development projects for food companies and industrial clusters in Lebanon.

The Food Advisory Unit (FAU) was launched on March 9 2010 at IRI under the patronage of His Excellency the Minister of Industry, and the partners in the Unit: The Chambers of Commerce, Industry and Agriculture; the Syndicate of Lebanese Food Industries, LibanPack, and Universities in Lebanon.

FAU aspires to link local technical resources with agro-food businesses, particularly with the purpose of improving the products and processes of Lebanese SMEs operating in the food industry.

FOOD ADVISORY UNIT'S FIRST AWARENESS WORKSHOP

The Food Advisory Unit (FAU), which is an initiative of ELCIM at the Industrial Research Institute (IRI), organized its First Awareness Workshop on June 29 2010.

Owners and general managers of the food businesses, production managers, quality assurance managers, R&D managers, and entrepreneurs have attended the workshop. Its objective is to raise awareness to all food small and medium operators and businesses about the technical capabilities of Lebanon's most reliable resources and to gain access to their services. Each of the partners introduced their technical services and answered all the questions regarding services and methodology of implementation.

ELCIM FRONT OFFICE AT CCIAB

Mr. Mohammad Choucair, President of Chamber of Commerce, Industry and Agriculture of Beirut and Mount Lebanon (CCIAB) and Dr. Bassam Frenn, Director General of the Industrial Research Institute-Euro Lebanese Centre for Industrial Modernization (IRI-ELCIM) signed a Memorandum of Understanding on July 2 2010. This MoU aims to strengthen the cooperation between CCIAB and IRI-ELCIM in order to better serve the Lebanese SMEs. This collabo-

ration will be in the form of an IRI-ELCIM Front Office at CCIAB, through which the know-how of both partners will be combined to provide a more comprehensive SME support services structure.

ELCIM AND LES VOLAILLES DE BATROUN ON TELE-LIBAN

Members of the ELCIM team accompanied a group from "Tele-Liban" as they visited Les Volailles de Batroun on May 5 2010. The aim of the visit was to shoot a documentary on a success story of how this company has been able to implement its quality system. ELCIM has assisted this company in its processes of quality implementation until it has reached the certification level. Vollailles de Batroun now has received its ISO 22000 certification and is exporting its products to a wide range of countries in the Middle East and Europe. The program was aired on television were ELCIM team members explained the process that this company has went through and their commitment to it.

TRAINING WORKSHOPS









MODELS FOR STRATEGIC PLANNING

On January 28-29 2010, ELCIM organized a workshop on the topic of "Models for Strategic Planning" presented by Dr. Victor Araman. The workshop which was held at Holiday Inn Hotel, Dunes Center- Verdun, focused on the notion of Resource Allocation and Optimization (using Solver add-in) and how to extract the maximum value from resources and activities. It also demonstrated the company's ability to explore complex combinations of possibilities for achieving the desired goals.

Dr. Araman discussed how to analyze a wide array of business planning and decision problems by building models with the help of spreadsheet software. In the modeling approach, he explained the essential structure of a decision problem in terms of objectives, decision variables, uncertainties, outcomes, choice criteria, and feasibility constraints. Through this discussion with the participants from various Lebanese SMEs, Dr. Araman provided some spreadsheet tools to assist in this process.

GUERRILLA MARKETING

"Guerrilla Marketing" is a very popular topic today. Due to the increased demand from SMEs to learn more about it, ELCIM held a training workshop on the topic on July 8-9 2010. The workshop was presented by Dr. Alfred Riachi and focused on how to use and adopt unconventional Marketing tactics and strategies to reach high effective goals.

Guerrilla Marketing is a modern and unconventional approach used to entail entrepreneurs to use minimal resources versus bigger competitors. Dr. Riachi discussed how to understand the most powerful and cost effective marketing and PR strategies for marketing a product or service to a set target market and achieving 12-month sales goal. By the end of the workshop, the participants were aware of the most modern marketing techniques, plans and strategies to reach high effective goals.

BUSINESS PLANNING & FINANCIAL MANAGEMENT

ELCIM organized a workshop on the topic of "Business Planning & Financial Management" on February 10-11-12 2010. This workshop was presented by Dr. Salim Chahine, at Holiday Inn Hotel, Dunes Center- Verdun. It focused on the major financing and investing decisions and their consequences on the business.

Dr. Chahine discussed how to understand the nature of decisions such as investing in new machinery or distributing dividends and issuing debt (Financing) or acquiring another company and the models and ratios used to assess such decisions. By the end of the workshop, participants had a deep understanding of the key areas of financial management and business planning: Financial analysis (Financial statements), Break-even analysis, Investment decision-making and Cost of Capital.

The workshop hosted participants from different companies and profiles who were exposed to cooperative learning through group work; and to problem-based learning through case study discussions.

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IRI^IS RELATIONSHIP WITH MINISTRIES AND PUBLIC INSTITUTIONS

THE INSTITUTE'S ROLE IN SUPPORTING THE NATIONAL ECONOMY IN GENERAL

The Institute today represents the Lebanese State in the negotiations and conclusion of agreements of mutual recognition of conformity assessment, certificates and markings in what relates to trade between Lebanon and other countries. The Institute was tasked with the issuing of certificates of conformity in the importation of industrial goods, pursuant to the Lebanese decrees of mandatory specifications, and also in exportation operations in accordance with the specifications of the destination countries.

It should be mentioned here that since 2004, the IRI has been the only internationally accredited body in Lebanon by the German Accreditation Body (Deutsches Akkreditierungssystem Prüfwesen (DAP)), as per the international accreditation certificate DIN EN ISO/IEC 17025. Consequently, the Institute is the only window available for the flow of Lebanese goods, which need laboratory tests and certificates of conformity, to the European and international markets.

THE MINISTRY OF INDUSTRY

The IRI is considered to be the quintessential technical arm of the Lebanese Ministry of Industry, especially as the IRI is a subsidiary body of the ministry, and that its Board of Directors is headed by his Excellency the Minister of Industry. The

IRI is continuously conducting the necessary industrial inspections and studies, as well as feasibility studies aimed at developing existing industries or establishing new ones. This is in addition to conducting studies on the added value of national industrial products and the need for certificates of origin for export clearance. Also, the Institute worked in parallel with the ministry in granting industrial licences, pursuant to decree No. 8018 dated 20/6/2002, which assigned the required role for the IRI in this regard, and is still working in parallel with the ministry whenever it is required to do so.

MINISTRY OF ECONOMY AND TRADE

Since its inception, the IRI has been cooperating with the Ministry of Economy and Trade, especially the Consumer Protection Directorate and the General Directorate of Cereals and Sugar beets.

A - CONSUMER PROTECTION DIRECTORATE

This directorate is tasked with taking samples from local markets on a regular and ongoing basis, and handing them over to the IRI for laboratory testing and issuance of the necessary reports, across various sectors. The IRI comprises 12 accredited laboratories that cover different sectors, in addition to a control and inspection unit, the meteorological calibration unit and the Lebanese Welding Centre.

B - GENERAL DIRECTORATE OF CEREALS AND SUGAR BEETS

The Industrial Research Institute manages and operates the work of the central laboratory for grains, flour and bread research on behalf of the Ministry of Economy and Trade. The laboratory is equipped in accordance with highly specialized international cereal laboratories. The laboratory meets all the needs of this directorate by controlling the quality of the imported and the locally produced wheat and wheat products (briefly, monitoring the ingredients that make up the Lebanese bread loaf).

THE MINISTRY OF AGRICULTURE

The Ministry of Agriculture requests the IRI to analyze samples from agricultural products or material on a frequent basis. These are usually sent to the IRI by the ministry for testing, whether upon importing them, exporting them or their usage. The IRI is also tasked with the analysis of fertilizers and pesticide residues in vegetables, fruits and other crops.

MINISTRY OF PUBLIC HEALTH

The laboratories of the IRI are used by the Ministry of Public Health in conducting special tests on bottled water, as a fundamental step in the process of obtaining a licence for the water bottling companies, in addition to other tests conducted by the instituted which include, for example, baby formula, cosmetics, medicine and other items as needed.

MINISTRY OF NATIONAL DEFENSE

The cooperation with the Lebanese army, including its various interests and divisions, has been firmly established since the IRI's inception.

The IRI meets the requests of the committee tasked with the receipt of the analyzed materials and the central reserve committee for foodstuff analyses, the stewardship for uniforms and equipment, in addition to the requests of the corps of engineers, the logistical corps and the military police and other corps as needed.

The IRI also holds training courses on welding works, solar energy and other scientific topics which the IRI proudly provides to this institution.

THE MINISTRY OF INTERIOR AND MUNICIPALITIES

The Textile, Leather and Rubber Laboratory at the IRI is continuously cooperating with the security forces in analyzing the uniforms of the Internal Security Forces, as well as shoes and equipment, in accordance with their requirements and in order to certify the conformity of these specimens with the specifications established by them, prior to purchasing uniforms and gear.

The IRI meets the various requests by the Internal Security Forces in different unmentioned sectors, including for example chemical analyses to identify contraband and other security-related analyses.

MINISTRY OF ENERGY AND WATER

The IRI works with the Ministry of Energy and Water in different areas, most importantly overseeing the manufacturing of gas bottles and certifying that they conform to the mandatory Lebanese standards. The IRI also inspects gasoline tanks in petrol stations, whether for licensing purposes or for maintenance when requested. In addition, the IRI inspects the nominal load of fuel tankers, in addition to other inspections that are conducted at the behest of the ministry.

The IRI also conducts studies and offers technical consultation in national issues when requested, issues that fall under the scope of both the ministry's work and the IRI's fields of expertise.

THE MINISTRY OF ENVIRONMENT

The IRI continually cooperates with the requests of the Ministry of Environment, whether by analysing samples to assess their negative environmental impact, or whether by providing the Ministry of Environment with its services in the field of the inspection and auditing of factories, before suggesting the optimal approach in the production process in order to mitigate the latter's negative environmental impact.

The IRI also hosts the Lebanese Cleaner Production Centre (LCPC), which was established as a result of the cooperation among the Ministry of Industry, the Ministry of Environment, UNIDO and Austria.

This centre's main objectives include ensuring compliance with environmental standards during the different stages of production, something that is beneficial in terms of reducing costs by keeping waste in check on the one hand, and improving the environment by recycling wherever possible during the production process on the other hand.

MINISTRY OF JUSTICE

The judicial authorities continuously refer legal issues to the IRI for technical advice, as the IRI is the reference point for these authorities in what pertains to scientific issues.

CUSTOMS

Collaboration with the Lebanese customs is mainly done in the fields of enforcing and verification of conformity with the mandatory specifications required for goods imported to Lebanon, and which are subject to customs restrictions. This is done according to a specific and known mechanism.

The Customs authorities, according to the customary procedure, can send samples to the IRI for analysis and for identification of their components, prior to clearing them for entry into the local markets.

THE LEBANESE STANDARDS INSTITUTION (LIBNOR)

The IRI worked diligently to establish the Lebanese Standards Institution (LIBNOR), which is tasked with issuing the Lebanese standards. In the beginning, this institution was established in the campus of the IRI, which incubated its operations until it was reactivated in 1998. Since then, the IRI published approximately one thousand national standards for the institution, as per annual contracts that were in force from 1998 until 2004.

The IRI is currently represented in the institution's Board of Directors, while the IRI is permanently represented in the technical committees tasked with issuing and updating the national standards.

THE LEBANESE COUNCIL FOR ACCREDITATION (COLIBAC)

Some time ago, the IRI realized that the infrastructure of a world-class quality process must include the following items:

- A national institution for the issuance of national standards, which in Lebanon is the Lebanese Standards Institution (LIBNOR), a body that is ever striving to improve its role.
- Bodies for conformity assessment that implement these specifications. This role is

primarily assumed by the IRI in Lebanon, not only in the application of national standards, but also in the application of international standards in export operations as the IRI is internationally accredited according to Certificate No. 17025

- Oversight of the local market. This function is tasked to the Consumer Protection Directorate at the Ministry of Economy and Commerce
- A national council for accreditation, whose tasks include accrediting laboratories, monitoring commissions, conformity assessment for products and processes in the country. This national institution was not yet established in Lebanon, and the IRI sought hard to establish it in order to complete the quality infrastructure at the level of national institutions, until the decree of its establishment was issued in 2004, while the decree to establish its Board of Directors was issued in 2006. The IRI is represented in the Board of Directors of the Lebanese Council for Accreditation (Colibac).

This council is still in the process of drafting its bylaws, which are nearing completion. Work is also underway to speed up the passing of the necessary legislations that will enable the council to start its operations and serve the purpose it was created for.



IRI^IS RELATIONSHIP WITH THE PRIVATE SECTOR

INDUSTRIALISTS

The IRI allots great importance to industrialists and industry in Lebanon. Four years ago, the IRI concluded an agreement with the Association of Lebanese Industrialists whereby it granted industrialists a fifty percent discount on the costs of all laboratory analyses, in accordance with the list adopted by the IRI more than ten years ago. The services provided by the IRI to the industrialists are as follows:

A – Analysis requests with the aim of improving the quality of production or finding solutions to production problems

Any industrialist can head to the IRI to request an analysis of a product produced in his factory with the aim of improving its quality, or as a result of a particular problem he is facing during production. At that point, cooperation and follow-up begin with the industrialist. In most instances, his request becomes a process of applied research with which these analyses either end up in improving the quality of the product or determining the underlying cause of the production problem and subsequently, working on solving this problem.

B – Pre-export Analysis

There are many products that cannot be exported to foreign markets without first being analyzed. As the IRI is internationally accredited pursuant to certificate No. 17025, its accreditation is recognized by more than 120 countries, rendering it virtually the sole window through which Lebanese goods that comply with technical specifications can flow into

the European and global markets, owing to the certificate of conformity issued by the IRI.

Therefore, industrialists head to the IRI to conduct the analyses required by the destination countries, in order to obtain certificates of conformity for their products which would give them access to international markets.

C – Product Certification

This is an optional program that any factory that meets the conditions can request, for implementation in its facilities according to a contract with the IRI and a specific mechanism at the latter; this would enable the factory to obtain the IRI's conformity mark for its products, in an ongoing and continuous manner. The IRI would oversee production through periodical analyses and inspections, before granting the factory certificates of conformity whether for export purposes or for ensuring the conformity of its products to national standards. This takes place in a routine manner, and also on demand, and its cost is factored in into that of the program.

MERCHANTS

There are goods that are subject to mandatory national standards. For this reason, importing such goods is subject to customs restrictions that stipulate their conformity to the mandatory national standards. This is verified by the IRI prior to allowing these goods into domestic consumer markets.

Hence, the relation between the importers and merchants on one hand, and the IRI on the other hand is constantly evolving. Efforts are underway, on a continuous basis, to facilitate trade exchange on one hand, and to verify the conformity of imported goods following a scientific method on the other hand.

Many merchants voluntarily head to the IRI to request tests and analyses of their merchandise and products, in order to determine their conformity with international standards in the case of export, or national standards in case of import, prior to shipping it from the country of origin.

FARMERS

The IRI's laboratories continuously cooperate with farmers. In truth, many farms voluntarily head to the IRI and request their products to be analysed.

The IRI provides analysis for farmers for the following products:

- Olive oil
- Honey
- Vegetables and fruits (pesticide residue)
- Irrigation water
- Meat and fish
- Other agro-food products.

RESEARCHERS AND SCIENTISTS

Many researchers and scientists head to the IRI to conduct tests and analyses necessary for their scientific research. Most of the time, their requests become applied research projects, as they are aware of the IRI's capabilities in this area. This is not to mention the fact that the IRI houses twelve labora-

tories that span many complementary disciplines, in addition to the meteorology laboratory, the Lebanese Welding Centre, the Euro-Lebanese Centre for Industrial Modernisation, and the Lebanese Cleaner Production Centre (LCPC).

CONSUMERS

The relationship between consumers and IRI is either direct or indirect, through the civil organizations and associations concerned with consumer protection, the environment and other fields.

DIRECT RELATIONSHIP

Any citizen can go in person to the IRI in order to test any product, substance or other items, which is what is often done by citizens to ascertain the safety of what they consume, be it drink, food, supplies, household electric appliances, building materials, petroleum products and other daily items.

INDIRECT RELATIONSHIP

Consumer protection associations and other civil organizations often head to the IRI and request analyses and tests of an environmental or health safety nature.

Cooperation with these organizations is done on a continuous basis by the IRI, which meets all the former's requests in return for special fees that take into account their conditions in most cases. If these requests were not complimentary, then they would be symbolic, in a bid by the IRI to support and encourage these groups to work for the public good.

Development of Human Resources & Laboratory Equipment

IRI STAFF

The IRI staff members amount to 130 at the end of 2010; 70% are males, while 30% are females. The age average is around 34 years.

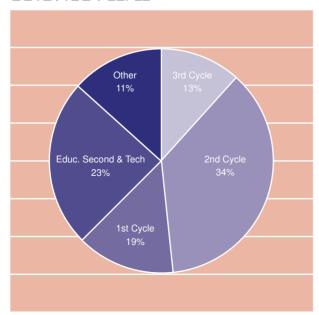
They can be categorized according to the level of their education:

17 hold a 3rd Cycle, 44 hold a 2nd Cycle, 24 hold a 1st Cycle, 30 are in their secondary and technical studies, and 15 are in other categories.

Education Level	No.	%
3rd Cycle	17 pers.	13%
2nd Cycle	44 pers	34%
1st Cycle	24 pers	19%
Educ. Second & Tech.	30 pers	23%
Other	15 pers	11%

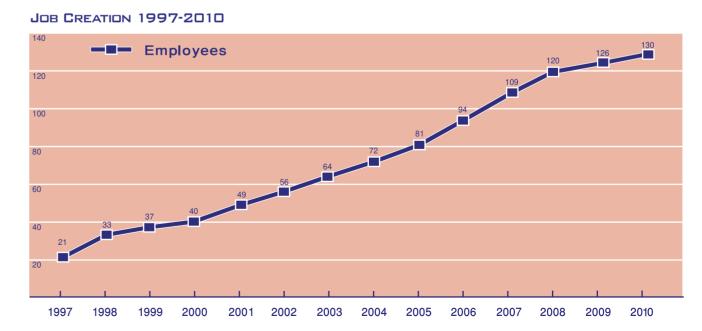
Average Age	Gender	
34 years	70% Male	30% Female

2010/130 PEOPLE





IRI EMPLOYEES



NEW EQUIPMENT

BLAINE AIR PERMEABILITY (FINENESS) APPARATUS:





This apparatus is used to determine the fineness of Portland cement in terms of the specific surface expressed as total surface area in square centimeters per gram of cement.



ISOWATER

Instrument for the determination of water absorption, apparent porosity, apparent relative density, and bulk density of ceramic tiles according to the standard ISO 10545-3, EN 99.





STOVE WITH FORCED AIR CIRCULATION:

Stove with forced air circulation, suitable for the heating of drying of ceramic tiles. It is capable of reaching a maximum temperature of 209°C.



VAN STEENBURGH SYSTEM



The Van Steenburgh system provides maximum separation of oil, acid, moisture, and hard particle contaminants through its unique method of pumping the refrigerant liquid or vapor at high velocity and high temperature into the Separation Chamber as it drops to near zero velocity. This causes the oil, acid, water and hard particle contaminants (copper chips, etc.) to drop to the bottom where they can be retrieved along with the maximum amount of retrievable oil. *No other system does this.*

SUB-COOLING

The vapor from the Separator passes through the compressor to the air condenser where it is condensed to liquid. It then passes to the Chill Chamber(s) where it is sub-cooled to 15° to 40° F / -9° to 4° C. This aids in the transfer of the refrigerant to a cylinder or system at room temperature or warmer. It also enhances the drying/filtering process. *No other system does this.*

DRYING/FILTERING

Sub-cooled refrigerant dries more efficiently. We take advantage by re-circulating the sub-cooled refrigerant at the rate of 300-400 lbs. / 136.3 to 181.8 kg an hour (average based on ambient range). This means maximum drying. *No other system does this.*



PUMP VAPOR

The Van Steenburgh system employs patented Compressor Liquid Injection during vapor removal. This means we pump a cylinder or system to atmospheric pressure without harm to the compressor! Get those last pounds. Don't send them back to the vendor with your empty cylinders. *No other system does this.*

NON-CONDENSABLES SEPARATION

The combination of sub-cooling, which causes non-condensables to rise quicker, and the on-board storage where the refrigerant is constantly being re-circulated, means maximum separation. The "air out" switch allows you to purge all non-condensables. *No other system does this.*

ADDITIONAL FEATURES

- Unique multiple thermal expansion valve design
- Oil Sight Gauge on compressor
- Float valve safety shut off on storage/Chill Chambers (backed by 3 additional safety shut offs to prevent overfilling on-board storage)
- Laboratory quality gauges
- Visual check points to monitor drying
- "Straight through" capability.

PEUTHONISS

TRIVAC D16 B PUMP



ULTIMA ID PRO REFRIGERANT ANALYZER

The Ultima ID Pro Refrigerant Analyzer is the most advanced portable instrument ever manufactured for determining the purity of gaseous refrigerants for the HVAC-R market.

Features Include:

- Advanced ergonomic design
- Rugged rubberized hand grips
- Large graphic display with on-screen instructions
- Fast 60 second test time
- Built in printer for instant analysis report
- Vapor or Liquid Sampling ability
- Internal, rechargeable battery (optional) for cordless operation in any location
- Hard shell carry/storage case
- Remote Software Update port.

TRIVAC D16 B pumps are oil-sealed rotary vane pumps. They are dual-stage pumps. The number in the type designation (16) indicates the pumping speed in m $3 \cdot h$ -1.

TRIVAC-B pumps can pump gases and vapors and evacuate vessels or vacuum systems in the fine vacuum range. Those of standard design are not suitable for pumping greater than atmospheric concentrations of oxygen, hazardous gases, or extremely aggressive or corrosive media.

The drive motor of the TRIVAC-B is directly flanged to the pump at the coupling housing. The pump and motor shafts are directly connected by a flexible coupling. The bearing points of the pump module are force lubricated sliding bearings. All controls as well as the oil-level glass and the nameplate are arranged on the front. All connections are to be found at the sides of the pump. The oil level glass is provided with prisms for better observation of the oil level. The pump module consists of assembly parts which are pin-fitted so as to allow easy disassembly and reassembly. The pump module can be easily removed without special tools.



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MISSIONS, TRAINING, WORKSHOPS & SEMINARS

	2007		2007 2008		2009		2010	
	days	participations	days	participations	days	participations	days	participations
Seminars & workshops	186	81	287	149	170	96	220	113
International missions & training	79	23	182	31	59	17	66	26

LOCAL TRAINING, SEMINARS & WORKSHOPS (1)

Participant	Organizer	Object/Title of the training	Date	Location
Mohammad Hajjar	First Protocol	Energy for the Future	28/1/2010	Gefinor Rotana Hotel - Hamra
Nadia Khoury Imad Hage Chéhadé	JICA / Ministry of Industry / Ministry of Tourism	Regional Workshop on "Instruments for Quality Assurance in Lebanon, Syria, Jordan, Egypt"	22-23/01/2010	Le Bristol Hotel - Beirut
André Kouek Ziad Moukarzel	IRI / ELCIM	Models of Strategic Planning	28-29/01/2010	Holiday Inn Hotel - Verdun
Bassam Kabalan	La Communauté Urbaine d'Al-Fayhaa / L'Agence Française de Développement	Pauvreté et conditions socio- économiques à Al-Fayha'a: Diagnos- tic et éléments de stratégie	02/02/2010	Centre Culturel Rachid Karamé - Tripoli
Naji Abi Zeid Bassam Kabalan	PAO	How to benefit from Technical Assistance Information Exchange	16/02/2010	Grand Serail - Beirut
Imad Hage Chéhadé Bilal Hussein	لجنة الأشغال العامة والنقل والطاقة والمياه	متطلبات التكامل بين السلطتين التشريعية والتنفيذية للنهوض بقطاع الكهرباء	1-2/03/2010	مجلس النواب
Wissam Abi Abboud	IRI / ELCIM	Business Planning and Financial Management	10-12/03/2010	Holiday Inn Hotel, - Verdun
Christiane Jbeily	Zahle Pilot Plant / CCIAZ	Food Quality Day Workshop	18/03/2010	CCIAZ
Sélim Kfoury	BIAT	Loans in Lebanon	19/03/2010	Chamber of Commerce of Tripoli
Mohammad Hajjar	McGill Alumni Association / LCEC / Ministry of Energy & Water	Leading for a Better Future	19/03/2010	Phoenicia Interconti- nental Hotel - Beirut
Robert Hajj Maya Majdalani	UNIDO-MACLE Project	Conformity Assessment Roles and Procedures	24/03/2010	Four Points Sheraton Hotel - Verdun
Edgard Najjar Naji Abi Zeid	Faculté des Sciences et de Génie Informatique	Le réchauffement planétaire	30/03/2010	USEK
Mohammad Hajjar	RCREEE	National Seminar on Impact assessment of the National Regulation and Policies for Energy Efficiency and Renewable Energy	09/04/2010	Hotel Coral Suites - Hamra
Sélim Kfoury	First Protocol / Bank Audi	Unified Arab Currency	12/04/2010	Le Bristol Hotel - Hamra
Mohammad Hajjar	USEK	Les énergies renouvelables	29-30/04/2010	USEK
Naji Abi Zeid Joseph Matta	CCIAB	Workshop on REACH legislation	30/04/2010	CCIABML - Sanayeh, CCIABML Bldg.
Antoine Fayçal	USEK	Le nucléaire: au service de la société	5/5/2010	USEK
Amine Jbeily	الجمعية العربية لوقاية النبات / الجلس الوطني للبحوث العلمية CNRS	ادارة صحة الخاصيل الزراعية وسلامة الغذاء	11-12/05/2010	نقابة المهندسين في بيروت
Naji Abi Zeid	صندوق البيئة في لبنان	اطلاق الدورة الثانية لتقديم مقترحات المشاريع	14/05/2010	Hotel Monroe - Ain el Mreisseh

LOCAL TRAINING, SEMINARS & WORKSHOPS (2)

Participant	Organizer	Object/Title of the training	Date	Location
Joseph Matta Amine Jbeily	SIS / LIBNOR	SIS-Sida project on Carbon Footprint - Beirut Workshop	18-19/05/2010	LIBNOR - Sin-El-Fil
Thomas Sabbagh	المعهد المالي	البرنامج التدريبي حول الصفقات العامة	18-05/1-06/2010	معهد باسل فليحان المالي والاقتصادي – بيروت
Naji Abi Zeid	CNRS / ESCWA / IRD	Lebanese Science, Technology and Innovation Observatory (LORDI)	28/05/2010	Bristol Hotel - Beirut
Jihad Hage Chehade	المعهد المالي	اصلاح المالية العامة: خارطة طريق نحو التحديث والحكم الصالح	31/05 -2/06/2010	معهد باسل فليحان المالي والاقتصادي – بيروت
Antoine Fayçal Hanna Francis	LIBNOR	Information Security Management System and Software Assest Man- agement	02/06/2010	Phoenicia Intercontinental Hotel - Beirut
Mahmoud Amhaz	UNDP / University of Balamand	Free software Conference - FSC2010	08/06/2010	University of Balamand
Siham Youssef Antoine Fayçal	Italian Trade Commission - Italian Embassy	Italy - Lebanon Economic Forum	19/06/2010	Four Seasons Hotel - Beirut
Sélim Kfoury	Presidency of Council of Ministers	Reforming the Investment Climate in Lebanon	28-29/06/2010	Grand Serail - Beirut
Mohammad Hajjar	LCEC	National Workshop to discuss the draft energy conservation law	02/07/2010	Hazmieh Rotana Hotel - Beirut
Bassam Kabalan Eliane Sawma Awad	The World Bank	Rapid Innovation Action Learning (RIAL) for Jordan, Lebanon, Syria	05/07/2010	Gefinor Rotana Hotel - Hamra
Mohammad Hajjar	NDU / WEERC / ALMEE	Strategic Impacts and Contributions of Applied Renewable Energy Inte- grated Solutions in Mediterranean Countries	30/07/2010	NDU - Louaize
Nancy Maalouf Ziad Moukarzel	ELCIM / IRI	"Guerilla Marketing" From Planning to Implementation	8-9/07/2010	Holiday Inn Hotel - Verdun
Edgard Najjar Naji Abi Zeid	IndyAct	From waste management to material management - The zero concept	26-27/07/2010	Safir Heliopolitan - Raouche
Georges Makdessi	CHOPIN Technologies	CHOPIN Technologies User Seminar	04/08/2010	Le Meridien Commodore Hotel - Hamra
Carole Maroun	ELCIM	Guerilla Marketing training	27-28/08/2010	Habtoor Grand Hotel - Beirut
Andre Kahaleh	LibanPack	Understanding Food Packaging Materials and their Applications	7-30/09/2010	LibanPack - Sin El Fil
Imad Hage Chéhadé	LGBC	Energy Efficient Air Conditioning Standards for Equipment in Buildings	24/09/2010	Rotana Gefinor Hotel
Antoine Fayçal Mohammad Hajjar Naji Abi Zeid Talal Zaki	Mounassabattcom	Beirut Energy Forum	30/09-1/10/2010	Metropolitan Palace Hotel - Sin El Fil

LOCAL TRAINING, SEMINARS & WORKSHOPS (3)

Participant	Organizer	Object/Title of the training	Date	Location
Robert Haddad Maya Majdalani	LIBNOR	ISO 15189 and Accreditation: Investing in Quality	07/10/2010	Hazmieh Rotana Hotel - Beirut
Mohammad Hajjar	UL / USJ / ALMEE	Solar Energy in Lebanon: Research Trends	08/10/2010	Lebanese University Campus - Hadath
Georges Makdessi	World Bank / LARI	Reducing vulnerability to climate change in agricultural systems in Lebanon	11-12/10/2010	Hotel Palmyra - Baalbeck
Imad Hage Chéhadé Antoine Fayçal	LGBC	Standard for Energy Efficient Air Conditioning Equipment in Buildings	12/10/2010	Movenpick Hotel
Sandra Sarkis Hanine Abdel Rahman	LIBNOR	Workshop on Conformity Assessment - Certification and Accreditation Pratctices	12-14/10/2010	Radisson Blue Hotel, Ein Al Mraysseh
Nicole Abi Farhat	وزارة الزراعة	الانتاج العضوي: دور وزارة الزراعة في النهوض بالقطاع	26/10/2010	نقابة المهندسين في بيروت
Naji Abi Zeid	AFED	Arab Environment 2010 Water: Sustainable Management of a Scarce Resource AFED Annual Conference	4-5/11/2010	Habtoor Grand Hotel - Beirut
Antoine Fayçal	Faculty of Engeneering II - UL	Engineering Job Fair 2010	4-5/11/2010	Palais des Congrès - Dbayeh
Imad Hage Chéhadé Antoine Fayçal	LGBC	Standard for Energy Efficient Air Conditioning Equipment in Buildings	08/11/2010	Movenpick Hotel
Antoine Fayçal Bassam Kabalan	وزارة الاقتصاد والتجارة	العلاقة بين حماية المستهلك والسياسة الاقتصادية العلاقة في لبنان	8-10/11/2010	ESCWA - Beirut
Antoine Fayçal Christiane Jbeily	USAID / Ministry of Economy / LIBNOR	TBT Agreement	11/11/2010	Gefinor Rotana Hotel - Hamra
Camelia Kanaan	UISF / OIA	Séminaire "Bétons modernes"	11-13/11/2012	OIA - Beyrouth
Nicole Abi Farhat	USEK	17th International Scientific Conference	12-13/11/2010	USEK
Tarek Hakim	Minister of Industry / Order of Engineers	10th Mechanical Week	30-11/2-12/2010	Order of Engineers premises - Beirut
Bassam Kabalan	المعهد المالي	ادارة المالية العامة في منطقة الشرق الاوسط افريقيا: خديات وخسين الاداء في ظلَّ الازمة العالمية	30-11/2-12/2010	معهد باسل فليحان المالي والاقتصادي – بيروت
Elias Dib	CNSRS / Association of Lebanese Industrialists / Minstry of Industry	The 10th Conference & Exhibition of Lebanese Industrial Research Achievements Program "Lira 10"	01/12/2010	Dbayeh Convention Center
Ziad Moukarzel	Order of Engineers & Architects in Beirut/ EduDMG	Future Director	09/12/2010	Order of Engineers premises - Beirut
Mohammad Hajjar	LCEC	The project board meeting of the UNDP Energy Programme and the National workshop on the Lebanese National Energy Efficiency action plan (NEEAP)	12/21/2010	Gefinor Rotana Hotel - Hamra

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INTERNATIONAL TRAINING, SEMINARS & WORKSHOPS

Participant	Organizer	Object/Title of the training	Date	Location
Joseph Matta	Jordan Institution for Standards and Metrology (JISM)	MENA Region Meeting Related to Introduction to Carbon Footprint throught Standardization	17-18/01/2010	Amman - Jordan
Elias Maalouf	EURAMET	EURAMET - WELMEC Seminar on Metrology and Conformity Assessment	1-2/03/2010	Brussels - Belgium
Khodor Fawaz	الهيئة العربية للطاقة الذرية / هيئة الطاقة الذرية السودانية	الفحوصات اللاإتلافية في التصويرالإشعاعي - مستوى أول	24-29/04/2010	الخرطوم -السودان
Imad Hage Chehade Antoine Fayçal	Centre Scientifique et Technique du Bâtiment - France	HQE	26-30/04/2010	Paris - France
Imad Hage Chehade	AIDMO	الاجتماع الاول للجنة الفنية الكلفة باعداد منهجية عربية للاعتراف المتبادل بشهادات المطابقة	7-9/06/2010	Tunis - Tunisia
Tarek Hakim	EFNDT	10th ECNDT	7-11/06/2010	Moscow - Russia
Naji Abi Zeid	TAIEX	Study Visit on Conformity Assessment of Industrial Products	21-25/06/2010	Prague - Czech Republic
Maroun Saikaly	Jordan Institution for Standards and Metrology (JISM) / U.S National Institute of Standards and Technology (NIST)	MENA Quality Infrastructure Training Program	21-22/06/2010	Amman - Jordan
Tarek Hakim	IIW	63rd Annual assembly & International Conference of the International Institute of Welding	11-17/07/2010	Istanbul - Tukey
Antoine Fayçal	المنظمة العربية للتنمية الصناعية	الاجتماع الثالث للجنة الاستشارات المترولوجيا	22-23/11/2010	Rabat - Morocco
Imad Hage Chehade	GTZ	9th meeting of the EUROMED working group on standards, technical regulations and conformity assessment	07/12/2010	Brussels - Belgium
Halim Bayeh Talal Zaki	Recovery and Recycling Network of Refrigerants, Na- tional Ozone Unit - Ministry of Environment	Industry recovery and recycling of ODS and GWPS	20-21/12/2010	Duesseldorf - Germany
Amine Jbeily	Swedish Standards Institute	Regional Workshop on Carbon Footprint	30-11/2- 12/2010	Cairo - Egypt

LOCAL MEETINGS & INAUGURATIONS

Participant	Organizer	Object/Title of the training	Date	Location
Nadia Khoury	AUST / ICOU / RASIT فمية الحوض النووي في التحقيق الجنائي		28/01/2010	City Café - Beirut
Elias Maalouf	وزارة الزراعة	لقاء وزير الزراعة مع مزارعي عنب المائدة في لبنان	17/04/2010	مصلحة الأبحاث العلمية الزراعية - تل العمارة
Imad Hage Chehade	L.C.E.C	ورقة سياسة قطاع الكهرباء	7/7/2010	UNESCO
Joseph Matta	الجيش - لواء الحرس الجمهوري	اجتماع لجنة خُديث المواصفات الفنية للمواد الغذائية في الجيش	24/05/2010	نادي ضباط لواء الجرس الجمهوري - القصر الجمهوري. بعبدا
Bassam Kabalan	BIFEX	The Beirut International Franchise Forum	27-28/05/2010	Cité Sportive, Jnah - Beirut
Christiane Jbeily	The Medical Resource Center	Meeting to discuss the challenges facing food safety and security	10/06/2010	Riviera Hotel - Beirut
Tarek Hakim	National ICT Strategy - Office of the Prime Minister	Meeting to discuss the draft pro- posal to set up a new Research and Design center in Lebanon by Intel	14/09/2010	Berytech - Mathaf
Naji Abi Zeid	ESCWA	اليوم العالمي للإحصاءات	15/10/2010	ESCWA - Beirut
Hanna Francis Mahmoud Amhaz	PSI - Lebanon	Unveiling of new Series of OKI A3/ A4 printers	04/11/2010	Metropolitan Palace Hotel
Amine Jbeily	FAO	معاً لكافحة الجوع	19/10/2010	نقابة المهندسين في بيروت
Khaled El Ghoul	خان الصابون	أمسية ثقافية اندونيسية	17/12/2010	طرابلس البولفار في غرفة التجارة والصناعة والزراعة

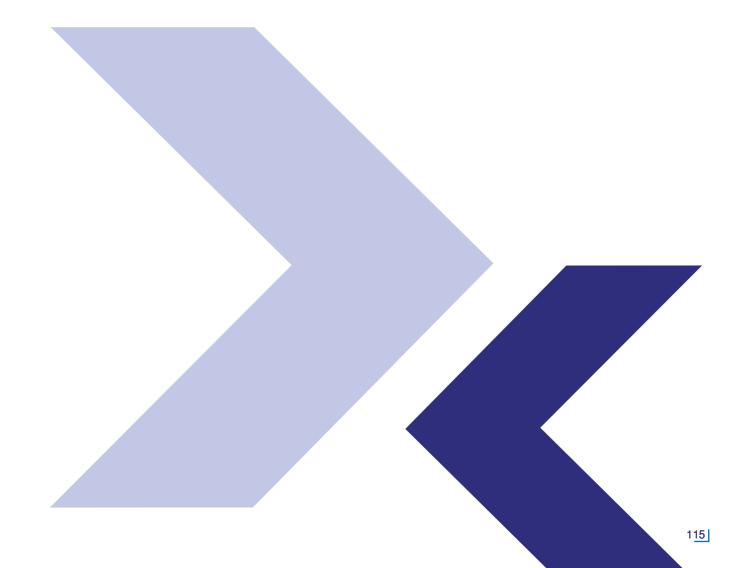
MISSIONS (TRAINERS, EXPERTS & SPEAKERS)

Name	Organizer	Object/Title of the training	Date	Location
Nancy Maalouf Antoine Fayçal Imad Hage Chehade Sélim Kfoury Siham Youssef	Ministry of Environment /IRI/ LCPC/ Spanish Regional Activity Centre for Cleaner Production	Mechanisms to enhance the Green Competitiveness in Lebanon	26/01/2010	Movenpick Hotel, Beirut
Elias Dib	لجنة الأشغال العامة والنقل والطاقة والمياه	مناقشة موضوع الرمل والبحص – الكسارات والمالع	13/04/2010	مجلس النواب
Robert Hajj	HORECA 2010	Jury Member in the National Extra Virgin Oil	27-30/04/2010	BIEL, Beirut
Imad Hage Chehade	Product of the Year	Product of the year awards 2011 Lebanon Edition - Jury meeting	30/09/2010	Four Seasons Hotel, Beirut
Joseph Matta Siham Youssef Nancy Maalouf	First Protocol	Environment: principles and solutions	19/10/2010	USEK - Kaslik

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IRI SEMINARS/CONFERENCES

Participant	Organizer	Object/Title of the training	Date
Naji Abi Zeid Imad Hage Chéhadé Nadia Khoury Sélim Kfoury Nancy Maalouf	IRI / AWEX	IRI / AWEX Cooperation	13/01/2010
Hanine Abdel Rahman	LCPC	Dissemination Seminar and Award ceremony for distribution of CP Certificates to Textile Sector	09/03/2010
Georges Makdessi Talal Zaki	IRI / ESCWA / LSES	التدريب الخاص بتصنيع وتركيب أجهزة التسخين الشمسي	11 - 18/05/2010
Maryam Abou Hamdan Bilal Houssein	LCPC	Producers' responsibility EU directives: REACH, ROHs, and C&L	20/05/2010
Mohammad Zeaiter	UNIDO / IRI / LCPC	الاجتماع العام لأصحاب مصانع ومعاصر الزيتون في لبنان	09/06/2010
Joseph Matta	IRI / ELCIM	The first awareness workshop of the food advisory unit	29/06/2010
Naji Abi Zeid Siham Youssef Nancy Maalouf Carole Maroun	IRI / AWEX	Internationalisation of companies from Lebanon: Promoting of exports and best investment climate	5-6/07/2010
Hanine Abdel Rahman Maya Majdalani Eliane Sawma Awad Mahmoud Amhaz Bilal Houssein Robert Hajj	IRI / IFREA / IRCA	Formation Auditeurs et Responsables d'Audit de Systèmes de Management de la Qualité ISO 9001:2008	29/06 - 3/07 / 2010
Maryam Abou Hamdan Mohammad Hajjar Raymonde Khazzaka	LCPC / IRI / UNIDO	Train the Trainers	21/09/2010
Maryam Abou Hamdan Mohammad Hajjar Camelia Kanaan	IRI / LCPC	Minimization Opportunities Environmental Diagnosis - MOED	23/09/2010





THE BELGIAN AGENCY «WALLONIA»

>

PROVIDES EXPERTISE IN THE FIELD OF BUILDING «CLUSTERS»





From the left: Mr. Swinen, Dr. Frenn, and Mrs. Abdel Rahim

THURSDAY, JANUARY 14, 2010

The Director-General of the Industrial Research Institute Dr. Bassam Frenn has made discussions with Mr. Philippe Swinen, President of AWEX (Agency for Export and Foreign Investments Development in the Belgian province «Wallonia»), in the presence of Mrs. Nada Abdel-Rahim, the Economic and Commercial Attaché at the Embassy of Belgium in Lebanon. The discussions addressed the issue of the preparation for a partnership and cooperation agreement between the Institute and the Belgian Agency known at the European level for its extensive expertise in building "clusters" for companies and institutions in specialized production sectors.

Dr. Frenn said Lebanon, through the European - Lebanese Center for Industrial modernization (ELCIM)

which is managed by the Industrial Research Institute, has contested the first successful experiment of this kind in cooperation with the Lebanese Association for Software Industry, establishing with it the first cluster for institutions and companies dealing with software and electronics.

The meeting has raised in an extensive discussion the economic relations between Lebanon and Belgium.

Mr. Swinen suggested to Dr. Frenn that IRI be a strategic partner for the Belgian agency for the organization of training sessions for eligible senior staff for the internationalization of small and medium enterprises in Lebanon.

The two parties put forward the idea of organizing a specialized workshop dealing with these subjects.

INTERNATIONALIZATION OF LEBANESE ENTERPRISES

PROMOTION OF EXPORTS AND BEST INVESTMENT CLIMATE WORKSHOP



The Industrial Research Institute (IRI) and the Wallonia Export and Investment Agency (AWEX) prepared a workshop on the 5th and 6th of July 2010 at the IRI conference room in Beirut, untitled: "Internationalisation of the Lebanese Enterprises Promotion of Exports and Best Investment Climate". The workshop was prepared in partnership with; AWEX (Wallonia Export and Investment Agency) - BELGIUM ACCIO – Agency from the Government of Catalonia in charge of Promoting the Internationalisation and Innovation of Companies)- SPAIN; SPRINTER – (Agency from Emilia-Romagna in Charge of Promoting the Internationalisation and Innovation of Companies) – ITALY ERAI and (En-



terprise Rhône-Alpes International)- FRANCE.

The workshop aimed at contributing , through the presentation of European experiences, to help Lebanese institutions design new and improved measures promoting export of Lebanese SME's, with the objective of increasing their market share on foreign markets.

The workshop also indented to help local SMEs to acquire the best business practices and promotion techniques available with the European public organizations that support international activities of firms. It also exposed the European experience in clusters and presented the best available practices in this domain.

THE BELGIAN BUSINESS COUNCIL HONORS PHILIPPE SWINEN

JANUARY 15, 2010

The Belgian Business Council in Lebanon, presided by Mouhannad Al-Assaad, Chairman of the Development Agency of Exports and Investment in Belgium, organized a banquet honoring Mr. Philippe Swinen, in the presence of Dr. Bassam Frenn, (Director General of the Industrial Research Institute), Mr.

Antoine Delchor (Chargé d'Affaires of the Belgian Embassy), and Mrs. Nada Abdel Rahim (Commercial Attaché at the Belgian Embassy in Lebanon).

The speeches made during the banquet have focused on activating the Belgian role in supporting the small and medium enterprises in Lebanon.

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RESEARCH & DEVELOPMENT

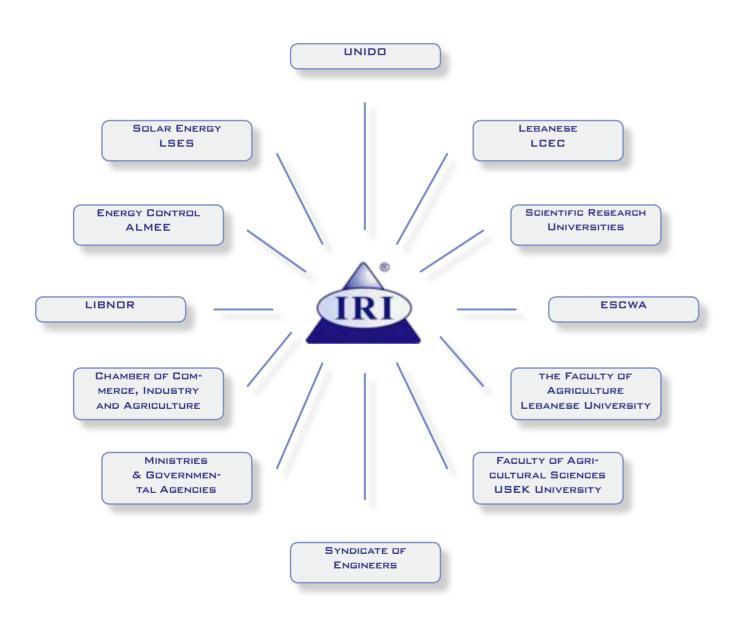
Туре	Number
Sea water contamination	20
Industrial & Environmental studies	3
Gas effluents	5
Liquid effluents	2
External audits	16

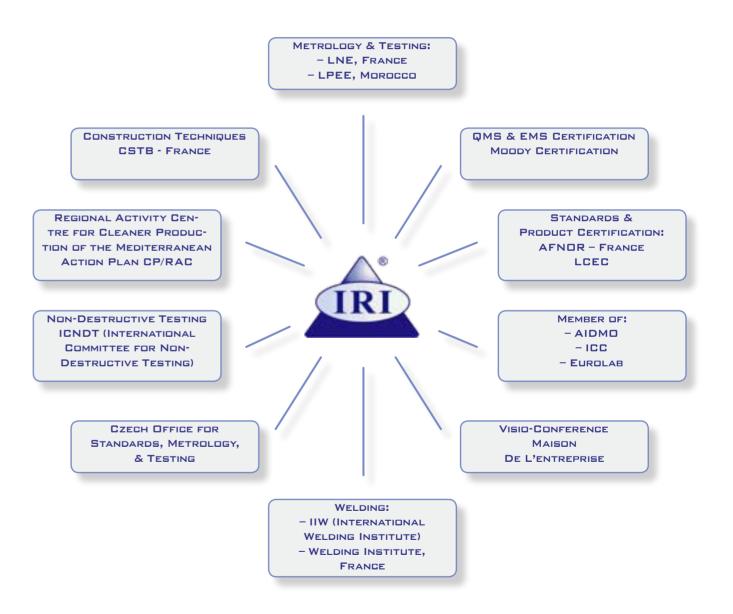






INTERNATIONAL PARTNERS







CALLING FOR EXPANDING THE BASIS OF MANDATORY STANDARDS

THE COMMITTEE FOR PARLIAMENTARY WORKS VISITIS IRI







12 OCTOBER, 2010

Deputy Mr. Mohammad Kobbany, president of the Parliamentary Public Works Committee accompanied by committee members visited IRI along with the Minister of Industry H. E. Eng. Abraham Dedeyan. The Institute's Director General, Dr. Bassam Frenn, gave a speech welcoming the Minister and the committee to IRI. During their visit they viewed a movie depicting the Institute's history and highlighting its accomplishments throughout the years and were given a comprehensive tour of IRI's laboratories.

Mr. Kobbany delivered a keynote speech in which he praised IRI's work ethics and showed how impressed he was with its high technical level. He focused on the necessity of complying with the existing laws and mandatory decrees and emphasized the need to extend the mandatory specifications. He also expressed his admiration and that of the committee members of the superior level of professionalism at IRI and called for increasing its budget by the state, urging the concerned departments to benefit from the Institute's expertise and high technical ability. Deputy Kobbany then mentioned the positive cooperation between the Institute and the Public Works Committee for many years in the past, especially that for bottled water.

H. E. Minister Dedeyan gave a speech praising in it IRI and its activities and noted the importance of cooperation between the Institute and other public entities.



VISITS TO IRI VISITS TO IRI

DELEGATION FROM THE SWEDISH INSTITUTION ANRIKA QUALITY SERVICES

19/03/2010







IRAQI DELEGATION ACCOMPANIED BY A GROUP FROM BIVAC 24/09/2010



DEAN OF FACULTY OF AGRICULTURE - LEBANESE UNIVERSITY 30/01/2010







02/03/2010





VISITS TO IRI VISITS TO IRI

STUDENTS FROM KHALED BIN WALID SCOOL

05/05/2010







UAE DELEGATION ACCOMPANIED BY A GROUP FROM THE LEBANESE MINISTRY OF AGRICULTURE

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STUDY VISIT BY SIEI







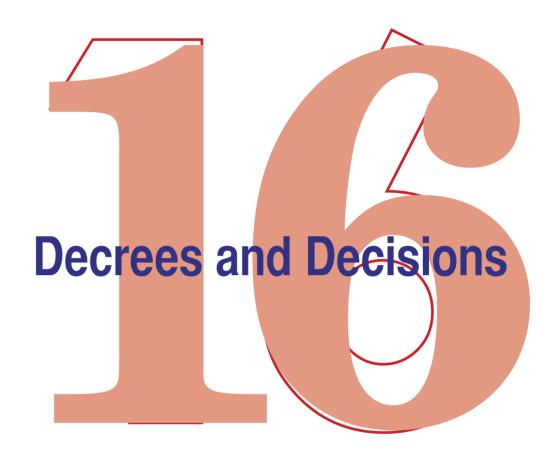
STUDENTS FROM THE ENGINEERING FACULTY

- LEBANESE UNIVERSITY

05/11/2010







DECREES



Decree	Decree Official Newspaper		Newspaper	Subject
No.	date	issue	date	- Subject
4526	1/7/2010	33	8/7/2010	To conclude a technical program for the mutual recognition of conformity certificates and quality mark (conformity sign) between the Government of the Lebanese Republic and the Government of the Hashemite Kingdom of Jordan
5031	7/9/2010	44	23/9/2010	To conclude a memorandum of understanding between the Lebanese Institution for Standards and Specifications (LIBNOR) and the National Institute of Metrology
5058	21/9/2010	44	23/9/2010	The upgrading of an employee from category (II) to category (I) and his nomination as Director General of Industry in the staffing of the Ministry of Industry
5032 5033 5034	7/9/2010	44	23/9/2010	The Users System in the Lebanese Council for Credit / Financial Regulations of the Lebanese Council for Credit / Interior System of the Lebanese Council for Credit
5047	20/9/2010	48	19/10/2010	Give legally binding characteristic for national standard specifications related to the sectors of food, chemistry, medical supplies and equipment, and construction
5305	28/10/2010	55	30/11/2010	Give legally binding characteristic for national standard specifications related to the sectors of health care technology, chemistry, solar water heater, and economic energy-saving lamps.
5382	5/11/2010	52	11/11/2010	Give legally binding characteristic for national standard specifications to health-related tools and equipment
5412	10/11/2010	54	25/11/2010	System of wage-earners in the Lebanese Institution for Standards and Specifications

DECISIONS



Decision		Official Newspaper		Subject
No.	date	issue	date	Cabject
38	1/4/2010			The Ministry of Industry request to approve the construction of a new building which is complementary to the existing building of the Industrial Research Institute in the region of Hadath
1/174	12/4/2010	18	15/4/2010	The formation of a national committee for agro-industries and food products
38	21/9/2010			A draft decree to give binding legal national standard specifications related to the sector of health care technology, chemistry, solar water heater, and economic energy-saving lamps.
1207/ 2010	3/10/2010	52	11/11/2010	Amendment of article I (one) of Decree No. 442/2004, dated September 4, 2004, stating to stabilize the temporary entry status for: Electrical apparatus for home use - Air fresheners - Racks of plastic
2	25/10/2010			A draft decree to conclude an executive program for the memorandum of understanding on cooperation in the field of mutual recognition of conformity certificates between the Industrial Research Institute in the Republic of Lebanon and the Egyptian Public Organization for Standards and Quality in the Arab Republic of Egypt
1/174	11/11/2010	53	18/11/2010	Amendment of the resolution No. 502 / 1 dated 21.09.2010 (the subjected imported wheat intended for human consumption to laboratory tests)



Institut de recherche industrielle Atelier de travail

Renforcer les exportations



expérience avec le Liban afin de

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mercy promptionals, account of ticiper à cet atelier. En l'espace de deux jours, nous avons appril Teny-toup dix lectris et nous avons eur des informations efficaces our la neigh que Dr. Faci Carnoval, président du fundicat Etuanais des Industries de pagiers of curture, «Ce que nou emarquors, c'est que la plupart ficient d'un soutien important, de true government. C'est l'un des beauting he, plus importants the men chit Rhanaios, pountuit Dr. Gamajar qui est équiement le directeur pi

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turopirel, d'où l'existence

de certaines fractions and

M.Abi Zeid explinar me in

shorton s'ameliores une

fun que le pays fire partie

Les obstacles selon Mr. Abi

Zeid sort principalement

de la reglamentation et de

la legislation européerne de la part des industriels, et

Cest ki que s'Unite le rile.

ste muché tood ven une

deventure en une globalica-

tion gámhride, qui amime à

Namilies (nemorciales), spaligno M. Abi Zerl, villab a nécessité d'attenur les

polyation liberators à un

as moire head & loves now

de PACAA

Bassant France, Directorier spinals offer de lour decemen les consolis na

will got expanded the partiager notice Faider à intégrer le mandié inter-nationals, a affixe à l'ambanadeur beige, Johan Vorkamenen, «C'export Manais possible un potontal lincoms, calci-d'est capable de louer un

CONTINUE AU RENTORCEMENT DES CAPACITÉS DES JONE

Minerites regions de l'Europe parti-ripent à cet ateller. AMEX de Belgi-

Ditaile et ERNI de Prances, indique Philippe Suinen president direc-

وضع رئيس غرضا النجازة والمستامة وغرزامة غي ميروث وجبل لبنار محمد لطوير مع المسابية المكاور يسام الحرن المسابية المكاور يسام الحرن المحاجبة المكاور يسام الحرن والمجمد الطامي مراسماء مالي والمجمد المسابية المسابية المسابية المحاجبة المسابية المسابية المحاجبة المسابية

اللبنائي التميية المطاقي ELCIM ليدي غرضة بيروث وجيل لينان بهنال توسيع طاق فينملت التي نقامها العرادة في

سندين ومنشر مشار الشولين بالأضافة كن شفير والذن نائب رئيس الفرقة محد لغ

الى ان معل افرائز - اللبنائي الوروسي النصيث المناعي ELCIM اداد لماني سنوات وهو برنامج صول من الذماد

pays, a till sjouté.

pour l'esportation de leurs pri-

الشيريتيس الغرفة تحديد إلى المشرب في ششر والمن خال اراب الثانية الثانية المسابقة ال

الشرافة الإوروبية وهذا أطفساء "ياتي من شبعن شطة متفاطة يتبادية الإورامة أربع ستوانت تجهل الرشهة الإلتاج البنائي طالب به المستاميون مجداد إلى المنتون العالي من الجورة الإسر الذي لابث أسالة جدواد والقرار الشخاصية أوطا بجوره

التراقة الإوروم وهذا الطفاء المنافع ا

رثيس عدد النموت المنادية يسام الغرن يسلم شعادة الإنغمان

ملى اهمية تأيية المواصفات والمعليم الدولية الصون السلامة العامة ودره الاخطار الناجمة عن سود استخدام بهدة مهندسي المحمد وفتيهه بل ستحمم بير دورات تدريب متذهصة ينظمها المركز اللبتاني للثلميم التأبع البعهد".

معهد البحوث انضم إلى منظمة الفحوص اللا إتلافية

الشموس (non - destructive testing) على مطبات التلميم للمياكل المعدنية المياني والمزانات الكشف الميوب الموجودة فيعا ولحضامها المواصفات

واطلع القرن وزير الصناعة ابراهام دده يئان على

هذا الاتجاز، واضعاً "أمواع الدولي المتنوع للمعمد شمن السياسة التطويرية التي يتتهجما على صعيد نقل التكنولوجيا المديثة واكتساب الخبرات العلمية

والنى دده يئن على هذه الاصداك، مؤكدا دعو

النعمد في برامجه وخططه المستقبلية، ومشددا

المتقدمة في العالم".

Hard

شم تصبت البهيدر. فعرض عضمتان حتى توفريد ELCIM فطيستان المساعية. وفال ان فنتاح لللند، في الغراة

سيمان من التعاطي الباشر مع فعلسميها واقاطهم من الطيرات

وتحديد اولوبالها للحسج

الإتفاقية

BLCIM , man , my

القرن، شهارة الشمام المعمد الى المضوية في اللهان التعادة المصناع المصناء الى المصنوعة في المنطعة الدولية للقدوص الالإلاقية (COIOT) خلال الربعية العوصية المنطقة التي ترامنت مع المقاد المؤتم العاشر المنطقة الاوروبية للقدوس الالإلكائية في موسكو، وكما عو معاود، تجرى هذه

دده يان افتتح ورشة عمل والصناعات المعرفية،

دده يتن قبيل ظهر البنوب في محهد البحوث المساحية ورشة الحمل الخومية حول المساحات العرفية التي يتكلمها الحيد بالتنسيق مع التكلمة العربية التنسية المتألمية والتعديل بعلساركمة وطود من الخلطة المزينية السعودية ولنصر وسوريا والزبن واللوبت وغفر والمورد والرس والمؤمد والمر والمراق والمقال صان المالة في مطارة مراقز المساعدة في ابدال ومحمهد المسموت المساعميسة وبالمطواء

هيئاهية والقعدين والتي الدير الداري والذكر في محهد البحوث المناعبة سليد القوري كلمة الدير العام المعنهد الدفتور بسنام القرن فقال غاوات مقمة الدعوة إلى ورضنة العنمل علما الإفنينال

والمنزاب على المسرفسة والكثراوجيا العلومات تعوائل هندهية للأنصاح في مكاومة

سياسة وزارة المساعة تلوم

علاقة معهد البحوث الصناعية مع الوزارات والمؤسسات العامة

egiptiment (right

الراقع الإسباس لشحطنيل معتوام فلدي. معتوام فلدي معتوام فلدي

وطر صحب تحوله أو المالية القريمية تتخور البينات الالمة والشاريع القيما البيارات والماليات على الحاراب لهستا الدور ان ستعوال حدقيير في تابن النهاسة المناصية الطاوية الرساد المناطرار الطنصادي

المساهمة في بناء مداميات الصناعة الوطنية، لبنة لبنة ومدماكا الر مدماك

الامراك العلمي ووسع أقبال الاختبار وطبق أمواب مؤسسات العلم المقدمة في العالم نرفد مما الديما من مغلمرات وخبرة

وارسى بنية علمها قل نظهرها في المنطقة. وشرع مساهات

المكتور بساو الشرن "جردة سنوية" قدم لها وزير الصناعة ايرامام دده يال، مؤكدا التناده

والمتلف . وفي كلبته، اشار الغرن الى أن أناه المعهد توزع في أربعة الجاهات اساسية المخليرات والتماليل المواسفات القياسية، التمديث المناب وساعدة البؤسسات المناعية في تطوير قدرتما على البنائسة وتوفير آلية الإنتاج الإنظف بما

فرن: ساهمنا في بناء مداميك الصناعة الوطنية د القرير السوي 2009 منظائه من البه الذي يؤديه الا تكن العماية بد البحوث الصناعية، منظوداتاتر فاكثر نموتمايي المطبقية في مفخر كلفة الد المنظمات والإنقالات والمراقبة المطبقة الإنتاج، ومطبق بنامر العودة والد التي نافية المجم وتذر توجه المعمد نموية المراقبة المهادة المودة المعاددة والمناورة المعادية المناورة المن والفاص وينشر ثقافته العلمية

ورشنا عمل "للمركز اللبناني للانتاج الأنظف"

تظم المركز اللبناني للإنتاج الأنطف" ورشتي مبل في اطار الشطته

للتومية والتدريب '، في معهد البدوث المناعية، في هضور عدد من

المعتبين والمعتمين وقد تناولت الورشة الاولى، كيفية نطبيق مقعوم

الانتاج الانقف في عنل المؤسسات الصغيرة والمتوسطة العاملة في قطاع زيت الزيتون وتعتبر هذه الورشة الفطوة الثانية ضمن برنامج معد لهذه

الشركات أبنا الورشة الثانية التي نظبت بالتعاون مع المركز الإقليس

اللابنام الأنطف في اسبانها في اطار المبادرة للتنافسية الخضراء ومكومة

مرشلونا ومرنامج الامم المتحدة للبيثاء فقد تحدثت عن موضوع الحد من

التمالات التشفيص البيش، وتناولت المسائل المرتبطة به قدمها الغبير

الدولي البروفسور معند عزين من جامعة العلك حسن الثالي في المغرب

والاستشارى الدولي للوكالة الالمانية للتعاون ومؤسسات الذرى

وحدص ويستر خاطعة طعمية خارج حدود الوطن. وفي موارد الشمويل، تقطية من الانتاج إلى من نشاطات المركز الاوروبي - الليناني للتحديث المناعي والمركز البناني الانتاج الإنظاء، مع تتمين آفته" وزارةً المال الافراجما عن مستمانات المجلس الجديد لادارة جمعيا الصناعيين، ترسم اطر التعاون المشترك بما يخدم الجمعية

يحمي البيثة ويشقض سب تكليف لإنتاج "كانت ادارتها ترسم دائما بتمزيز دور المعمد واعطاله الحوافز الضرورية (المالية والمعنوبة) "كي يطل متحروا من العمل البيروفراطي والتقليدي الذي يكتل الإدارات العامة في استراتيجيتها على المديين الآني والبعيد، وتكمن اهمية

شقير وقع مع مدير معهد البحوث إتفاقية إنشاء مكتب تمثيلي لركز ELCIM لدى غرفة بيروت غيما يتوح في الأفق استعداد لتكويز معاضرات خمية الفذ

الشاص والذا جزه مز تعنور سياسي - التصادي الدان بعثوم للعبرقية وتتوعباتها الإنساسانية في المناعبة وغيرهاد، إفتا في الردا يتكس القرن وتحدث الطورن وتحدث الطرز خامتبر ان القبائية التعاوز مع تعراة تضرح في راحثر استراتيجة الطراقة فتر برسجة العهد شر المعرفات موقات العهد شر على الطور حالة المعرف المعرفات المعرف

التقرير السنوى لعهدالبحوث الصناعية

لليضر فليتكر للامتياد (١٨٥١/١٥٥)

بهذا عرش ولي

والمد عن السائسة الاجتبية عن ساع لا تتوفر فيها عناصر الجودة وتقديم خدمات شيه مجانية بما لا بزيد عن كلفتها". علما أن البعهد يقدم المعهد الدراسات البدلية العلمية للقطاعين العلم

كانت قد هيست من المعهد لاعوام". عرفق بابل في استمرار أبجابية التعامل المشترك "وفي تحقيق إبجابيات واسعة مع

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