



**INDUSTRIAL RESEARCH INSTITUTE**

*In the Service of Industry & Development*



# IRI NEWS

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## Editorial

*The Industrial Research Institute's mission is to provide technical assistance to the Lebanese industrial sector, contributing to its national and international development. For this, we offer a large variety of services that cover many fields, such as scientific and technical assistance, inspection and control, conformity certification of goods and quality system. Thus we offer our services to a large variety of industries, governmental organizations, individuals and other productive entities.*

*For this purpose, we use integrated means for the development of industrial processes, considering technological issues, market opportunities, economical and environmental aspects. Focusing on this objective and considering the needs of the Lebanese industrial market, especially now at the break of the twenty first century, we launch our first issue of IRI NEWS with the faith that its contents and those of the coming issues will be constructive and informative. We hope, through this publication, to be able to reflect, as much as possible, the variability of the Institute's activities, the services it offers and the ongoing and future projects it's undertaking, always in the same perspective: "In The Service Of Industry And Development"*

## Quality Certification

Under the patronage of His Excellency, the Minister of Industry, Trade and Economy Dr. Nasser Saidi, and with the participation of representatives of the Lebanese industry sector, the Industrial Research Institute organized, on the 28th of January 1999, with the collaboration of AOQC MOODY - France, a seminar of high importance on ISO 9000 and 14000 certification.



The objective of the seminar was to emphasize the importance of quality certification for all enterprises, small medium and big. Access to new international markets, with more facilities, would be even exclusive to the ISO certified enterprises. However the certification and what it means in terms of organization and methodology of work, presents many other advantages for the enterprise, since it is an efficient instrument of development to gain clients' satisfaction and fidelity, and it is an immediate economic way of cost reduction along with the decrease of rejects and alterations.

AOQC MOODY International is one of the certifying institutions. It is present in the 5 continents and is known worldwide due to its different accreditations. At the end of this seminar, a cooperation agreement was signed between IRI and AOQC MOODY - France. This agreement was the issuing of AQOC certificates for ISO 9000 and ISO 14000 via the IRI, after auditing carried out, in common, by auditors of the two organisms.

The certification is within your reach, why go without it!



The Industrial Research Institute was established in 1953. It is a Lebanese, not-for-profit institution, for industrial studies and research and scientific material testing and analysis. It is deemed, under the Decree No. 10059 dated August 17<sup>th</sup> 1995, to possess public utility status. It operates under the Ministry of Industry and it is independent administratively and financially.

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 scheme.
- To maintain close co-operation with official institutions, industrial organizations, and development boards on the national and international levels in matters relating to the industrial development of the country.

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. The essential resources that enable the Industrial Research Institute to realize the above mentioned aims are as follows:

A permanent reliable body of experts, specialists and engineers in many fields.

Laboratories and scientific equipment in many fields such as:

- *Chemical and Physical Chemistry.*
- *Mechanical and Material Testing.*
- *Electrical Engineering.*
- *Soil and Civil Engineering*
- *Textile, Leather and Rubber.*
- *Petroleum and Petroleum Products.*
- *Bread, Flour and Cereals .*
- *Metrology and Calibration .*



A Library with scientific and technical publications including International Standards and Norms, the updating of which remains to be a continuous process.

A lecture Room, a Study Room and a Seminar Hall.

Equipped workshops, a pilot plant for initiating pilot industries.

A Welding Institute for training and certification of welders, inspection and control of different types of welding.

The Industrial Research Institute has the means and ability to issue technical standards as could be requested by interested clients. Also the Industrial Research Institute participates in all the technical

committees of the Lebanese Standards Institution ( LIBNOR ) for studying and issuing of the Lebanese Technical Standards. The work and the activities of the Institute are subject to many laws, decrees and ministerial decisions. For indication purpose, the following are some:

The Industrial Research Institute's laboratories are officially licensed by the Lebanese Government under article 22 dated 5 May 1960 and under the Council of Ministers' Decree No. 4962 issued on 13/03/1982.

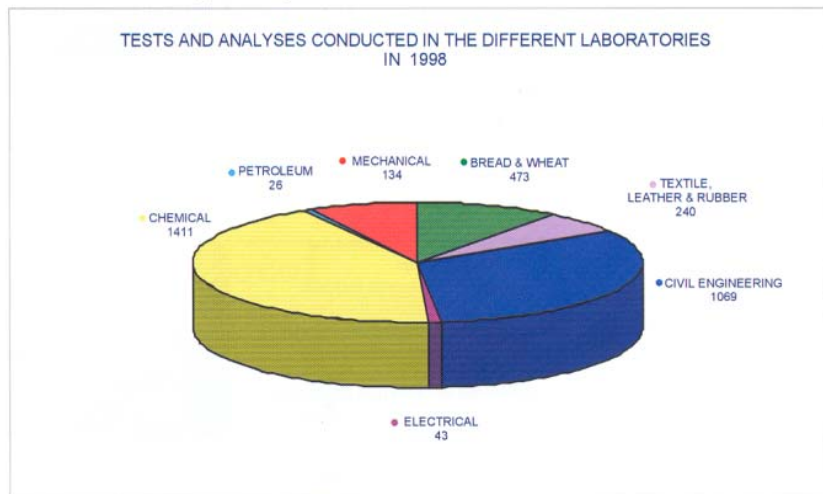
By laws No. 475 ( 16/11/1964 ) sections 3,4,5,6,7,8 and 9, the Industrial Research Institute was given the function of design and material approval and the function of regularly testing of all steam boilers ( the locally manufactured and the imported ). It is, under the Presidential Decree No. 3356 issued on 02/04/1993, the party appointed by the Lebanese Government to conduct testing on all new LPG cylinders and pressure gas regulators ( the locally manufactured and the imported ). It is also the Institute appointed to conduct regular testing of LPG cylinders at the filling stations as specified by the Minister. In accordance with Prime Minister decision No. 19/96 dated 15/03/1996, the Industrial Research Institute is a member of the committee assigned to study the custom's transactions.



# Tests and Analyses

An important feature of our laboratories lies in their diversity, and in the fact that they can go in depth and in breadth to cover a wide range of products serving in physical and chemical testing. In addition, our technical staff can serve in giving technical advice as to the interpretation of the testing results and in giving solutions to problems.

The numerous tests and analyses that have been conducted in 1998 are distributed among the different laboratories as represented by the Pie-Chart below:



## Our Staff...



The Institute has currently a staff of 36 qualified employees, a reliable body of experts, specialists and engineers in many fields.

Our technical staff participate in workshops and seminars of different topics (construction, food industries, environment, ministerial topics and others), as well as they participate in making Lebanese Standards at the Lebanese Standards Institution - Libnor.

### EDUCATIONAL LEVEL

PhD	5
ME/MS	10
BS/BA	7
Administrative Staff	5
Technicians	9
<b>Total:</b>	<b>36</b>

### LENGTH OF SERVICE AT THE INSTITUTE

Number of persons	Number of years
23	1-5
4	5-10
3	10-20
6	> 20
<b>36</b>	

### SEX

Males	Females
24	12
<b>36</b>	

### AVERAGE OF AGE

36 years

## Normalization and Standardization in Lebanon



The Ministry of Industry, with the collaboration of the Ministry of Public Works and the UNESCO, organized a seminar on the Standardization and its Application for Industrial Quality and Development on the 6<sup>th</sup> and 7<sup>th</sup> of July 1998 at the Industrial Research Institute. The seminar was conceived and prepared by the Lebanese Standards Institution - LIBNOR, and the Industrial Research Institute.

The final recommendations were the following:

### 1st: About standardization:

- The participation of all concerned parties in the setting of Lebanese standards, in the Arabic language.

- Promoting labels of conformity and preparing a program for its implementation.
- Referring to regional and international standards for commercial exchange and national exportation and the importance of mandatory standards related to public health and safety and environment.

2nd: Setting up laboratories and accreditation centers.

### 3rd: The role of the Industrial Research Institute:

The Industrial Research Institute, having a highly qualified technical staff and well equipped laboratories, it will have a remarkable role in:

- Enhancing the activities of research and development for the service of Lebanese Industries.
- Coordinating with other laboratories especially in universities, to avoid duplication in expensive materials and equipment.

- Modernizing the procedure of testing and analysis.
- Setting up of subcontracting and partnership exchange with similar laboratories and institutions abroad.
- Coordinating with industrialists to define a unified way of sampling in order to conduct tests and analyses and to deliver the necessary certificates.



## The Welding Institute

The Lebanese Welding Institute (ISL), financed under a French Lebanese Protocol, started its activities in March 1998, aiming at bringing the best solutions to welding problems of Lebanese Companies through a Training Center, a Study and Research Bureau and Inspection and Control Services.

### Activities of ISL:

- Practical and theoretical training on all welding procedures.
- Delivery of Welders qualification certificates.
- Control and inspection for all metallic constructions.
- Research & studies to answer all welding problems.
- The Lebanese Welding Institute is equipped with the following:
  - 20 working cabins.
  - 8 Oxyacetylene welding posts.
  - 7 posts of Shield Metal arc Welding.

- 6 posts of semi automatic welding (MIG/MAG).
- 5 posts of TIG welding.
- 2 posts of oxyacetylenic flame cutting.
- 1 oxythome OA/Plasma for cutting.
- 1 special machine for cutting tubes.
- 1 grinding stand, with 6 grinders and 1 gouging post.

The ISL is available for all materials, positions, types and sizes of joints and all interested persons.

The training location can be in your training center, at your sites, in your workshops,...

Lecture/Teaching rooms are available for Engineering Pedagogy.

A Mechanical Testing Laboratory serves for testing of different materials, for welders qualification test pieces and for the qualification of

the welding procedure, with 1 tensile, 1 hardness testing and 1 impact testing machine.



A Non Destructive Control Laboratory for the control of metallic materials, detection and interpretation of defects in welding joints.

This laboratory consists of 1 X-Ray machine of 200 KV, 1 Ultrasonic apparatus and 1 portable Ultrasonic apparatus.

A Metallographic Laboratory.

A Laboratory for development of X-Ray films.

# Development Process...

## The New Building of IRI

The new premises of the Industrial Research Institute will be located next to the new Lebanese University campus -Hadath, in an independent building made specially for the Institute.

The new building, which will be ready within few months, is conceived to meet all the staff and clients' needs and expectations, in matters of new laboratories, specialized services and innovative technologies.

New spacious laboratories, a large pilot plant, a reading room, a research and documentation center,

amphitheatres, seminar and conference rooms and an exhibition hall, with the most up-to-date equipment, will be at the client's service for any test or analysis, research or documentation he may require or event he may need to organize.



## Belgian Protocol



The Industrial Research Institute exercises three types of functions:

Issuance of compliance certificates, execution of industrial and economic feasibility studies, and execution of services in its capacity as a control and analysis laboratory.

IRI emerged from the war with most of its equipment either damaged or obsolete.

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An invitation to tenders was issued in 1997 to Belgian

suppliers and the contract was signed in December 1997. It is expected that the equipment will be delivered to IRI before soon.

The equipment list that will be delivered covers the following fields:

- 1- Petroleum and Petroleum products analysis.
- 2- Mobile Laboratory for petroleum and petroleum products analysis
- 3- Paint analysis.
- 4- High-tension and X-ray.
- 5- Road covering materials testing.

## Cooperation Agreement IRI - LNE



In August 1998, an agreement of cooperation was signed between the Industrial Research Institute (IRI) - Lebanon and the "Laboratoire National d'Essais" (LNE) - France, in which it was settled that the two parties will collaborate by joining their knowledge, relations and means.

This cooperation is expected to take the shape of:

- Exchanging information and technical experience.
- Preparing together research programs for the benefit of LNE and IRI.
- Organizing mutual meetings, seminars and other technical and scientific events.

It is also viewed to achieve subcontracting operations such as :

- Carrying out, in subcontracting, by the other party, calibrations, tests or specific studies requiring qualification and specialized equipment.
- Assistance of the LNE to the IRI for the development of its laboratories of testing, metrology and calibration.
- Placing a technical team of experts by one party at the disposal of the other whenever needed.

This cooperation can also be expressed through:

- Individual training executed in LNE laboratories.
- Participation of interested personnel at joint seminars.

## *Future Perspective*

*In May 1998, a new strategy plan aiming towards the rehabilitation of IRI through the reinforcement of both its human and material resources has been set and it was approved by the Institute's board. It consists of:*

*\* Setting up of a Subcontracting and partnership Exchange to provide information and advisory services to Small and Medium Industries in Lebanon and to promote subcontracting and partnership between Lebanese subcontractors and international SME's. (Ongoing).*

*\* Establishing new laboratories, namely a Bacteriological laboratory and a Pharmaceutical and Pharmaceutical Products laboratory. (Ongoing).*

*\* The upgrading of laboratory equipment and apparatus through the renovation of already existing instruments or the acquiring of new up-to-date equipment in order to meet the future market demand according to international standards mainly on environmental issues. (Ongoing).*

### CONTACT US AT:

**INDUSTRIAL RESEARCH INSTITUTE**  
Paris Avenue, Père Lebret St.,  
Ras Beirut

Phone: (01) 66480 - 364983/4 (03) 623129  
Fax: (01) 366509  
Email: iri@cnsr.edu.lb  
indite@cyberia.net.lb  
<http://www.iri.org.lb>



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*Name of the Institution: .....*

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