

**In a study, submitted to the Minister of Industry:
Starting the application of “Reverse” engineering system, industrially**

Dr. Nader Riad, Counselor of the Committee for Industry and Energy, at the People’s Assembly, and Chairman of the filiation of Pressure Vessels Manufacturing at the Federation of Industries, has stressed the importance of establishing a specialized Center, subordinate to the Ministry of Industry; to work in the field of evaluation of commodities and products, and to render services in that of Reverse Engineering.

In a study submitted to the Minister of Industry, Dr. Mustafa El-Refa’i, Dr. Riad has alluded to the fact that evaluating products and commodities, as an activity, is a primordial one; necessary for any industrial activity.

This is due to its importance for evaluating such commodities, whether those which are in the market, or others that are still in the phase of research and development, and as such; serves directly the activities of consumer’s protection; especially in the sphere of commodities related to public health, and to the consumer’s safety and security.

Taking into consideration the fact that Faculties of Engineering in Egypt have not yet started introducing disciplines of products’ evaluation in their curricula, although such is the standard practice in analogous curricula of Engineering in universities abroad, the importance of establishing such a Center proves itself, as a correctional procedure, imposed by such a shameful lack in responding to the needs of industry, as well as those of the consumer, for this vital activity.

The study emphasized the importance of supplementing this activity of evaluating commodities and products, with another, not less important, namely that of Reverse Engineering; since it is one of the essential resources for industrial development and low cost technological modernization, in application of the well known saying: "We do not need to reinvent the wheel; since it is enough to apply it for whatever use!"

Dr. Nader Riad pointed to the experience of many developed countries that have benefited from Reverse Engineering, among which is Japan, that depended on it at the outset of its industrial renaissance, copying high tech products; as a low cost solution of the transfer of technology, or even devising it, followed, on the same way, by Korea.

If such countries, notes Dr. Nader Riad in his study, have attained, along the last thirty years, that phase of capability of self-development, technologically, realizing their advancement in the sphere of technological innovations in all fields; still China has not stopped depending on Reverse Engineering, for the transfer of technology, though its own technological capacities have reached an advanced level.

The opinion supporting this statement, focuses on the need of Egyptian industry, in its current phase, to apply developed technical solutions, introduced in engineered commodities and products, at the same pace as that of the development itself; especially since this would immensely make up for the time already lost, and on the other hand allow for enough time to introduce such solutions, or transfer the technology pertaining to them.

The study has pointed out that it is logical, in processes of scientific survey, and in technical studies related to the components of more advanced commodities, to resort to the principle of Reverse Engineering. For it enables to

attain those technical (and technological) solutions, that are immediately applicable, for a low cost.

This is because the processes of evaluation of products, and work in the sphere of Reverse Engineering, depend on specialized expertise, belonging to experts in such specializations, and this is related to industrial secrets that should be kept under the control and supervision of the State, entrusted, as it is, with public benefit.

Dr. Riad called for the establishment of the Center under the umbrella of the Ministry of Industry, as the governmental body responsible for the realization of national development, and guardian of the data, statistics and figures of all the industrial activity.

The study has affirmed that a great part of the work carried out in the activities of evaluation of products, as well as research concerning Reverse Engineering, will be at the charge of different industries, as such is an activity related to research, development and transferring technology at a low cost.

This means that the process of charging different industries with such services, and furnishing services researched by the Center would be against due payments, which would will cover the Center's budgets, and provide a surplus Enabling the Center to develop its material and human potential, a guarantee of the continuity of its evolution, in accordance with future variables.

Dr. Riad has shown that there is a similar case of success in the sphere of industrial service activities< that which is an exemplary model, referred to in the study; for the Center of Metal Research, the Welding Filiation subordinate to it, is a good example of high-level technical services.

The Center supplies the entire industrial sector with services of training, initiation, inspection and research, in the fields of metals and welding. These services are offered, in return for fees which, next, provide a huge financial surplus; thus enabling the Center to maintain the technical experiences, represented by the experts working for the Center, or specialized experiences; required in some cases, along with the continuous development of laboratories and technical capacities.