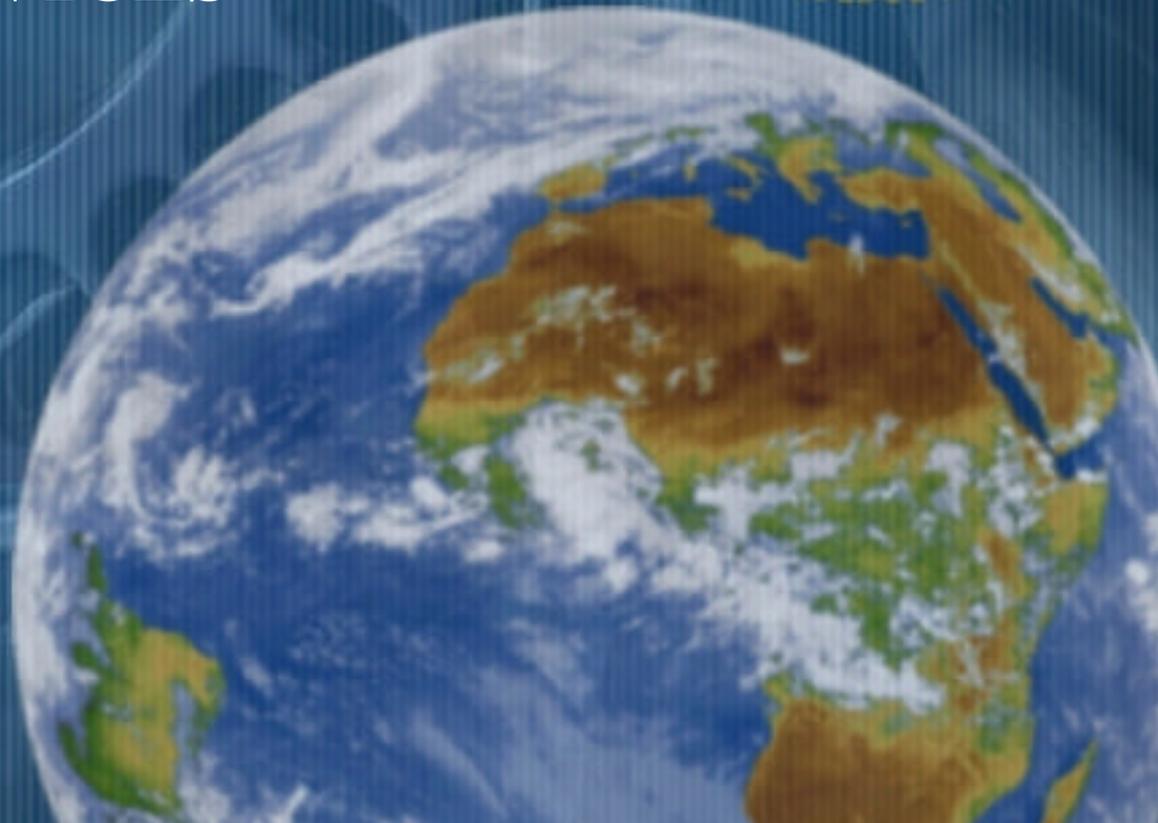


COMIBASSAL
INTERNATIONAL

مكوميصل
COMIBASSAL
World Wide Services



**Engineering Inspection
and Laboratories
SERVICES**



Services

Our objective is to verify that the product furnished by the supplier is in full compliance with our client's purchase order's specifications and international standards.

We take pride of the fact that we can perform services for our clients locally and in all over the world (Europe, USA, Canada, South America, China, India, Korea, Australia and Middle East).

COMIBASSAL's name is internationally known and our inspection certificates are recognized by banks worldwide in connection with transactions covered by letter of credit where our certificate is specified as condition of payment.

A brief listing is shown below to provide an overview of the range of our services:

1- MECHANICAL EQUIPMENT AND TUBULAR PRODUCTS

INSPECTIONS

COMIBASSAL regularly inspects at all the major works of mechanical equipment and all major mills tubular products in all over the world.

We have long history of supporting utility projects, gas, oils and petrochemical fields with our inspection services.

The variety of mechanical equipment and tubular product is varied and extensive, here is a partial listing:

Services

Pumps (positive displacement, Centrifugal & Screw)	Weighbridges
Compressors (Reciprocating)	Mixers, Crushers & Dampers
Compressors & Blowers (Rotary)	Pipes
Engines	Valves and fittings
Gearboxes	Heat exchangers and Condenser tubing
Fans	Gates
Cranes & Loaders	Rubber plugs
Conveyors (belt, chain & apron)	

To illustrate what a typical COMIBASSAL inspection scope would contain, we have outlined details of pump's inspection:

Pump's inspection

- Close visual examination of pumps, motors, couplings, gearboxes and base plates to make sure that manufacture and finish is to acceptable standard and all data on nameplate conform to the specifications contracted for.
- Supervision of performance tests over the full working range of the pump from touch point to maximum fill point. Such test shall prove that specified head, discharge, power and efficiency conform to the specifications agreed upon and the pump is free from over-heating, cavitations and excessive vibration over the specified range.
- Obtaining and reviewing manufacturer's work certificate and materials' certificate.
- Examination of painting, shipping marks and packing.

Services

- Issuance of a comprehensive inspection report covering the pump's inspection.
- Issuance of an inspection certificate covering the pump in case of conformity to the specifications.

2- ELECTRICAL EQUIPMENT INSPECTIONS

The inspection of Electrical equipment is one of our major activity. COMIBASSAL inspect range from the large generators, motors, and transformers through small control panel and cables at the major works of electrical equipment in the world.

Here is a partial list of items which COMIBASSAL inspects:

- Motors
- Generators
- Transformers
- Switchgears
- Control panels
- Circuit Breakers
- power cables
- Telephone cables
- Lighting fixtures
- Reactors, rectifiers and relays

We have out lined details of a motor inspection:

1. Visual inspection in order to check for data on the nameplate, main dimensions, painting and finish.
2. Witness routine and type test comprising:
 - ? Measurement of cold resistance winding.
 - ? High voltage test.
 - ? No load test determination of no load losses.
 - ? Insulation resistance measurement (megger test).
 - ? Locked rotor test.
 - ? Partial load test and over load test (25,50,75,100,125 % of rated load)

Services

- ? Noise measurements.
- ? Vibration measurements.
- ? Heat run test.
- ? Over speed test.
- 3. Examination of packing and shipping marks.
- 4. Obtaining and reviewing manufacturer works certificate.
- 5. Issuance of a comprehensive Technical report covering the motor inspected.
- 6. Issuance of an inspection certificate covering the motors in case of conformity to the specification.

3- GENERAL MATERIALS AND PRODUCTS INSPECTIONS

Over the years, through countless inspection assignments, we have developed inspection procedures and knowledge of a vast number and type of materials and products which include the following:

- ? Steel Mill Material and products (Steel plates - Tinplates-Bar -Billets - Ferrous Materials - Non Ferrous Materials- Bolts - Fasteners).
- ? Paper Mill products (all kind of papers).
- ? Bulk and bagged Cargoes (Coal- Cement- Bauxite-Manganese- Chemicals).
- ? Railway sleepers (Ties).

The inspection procedure of the above materials and products might include the following common elements:

- ✍ Developing a sampling plan.
- ✍ Verification of dimensions, surface finish, physical properties and chemical properties.
- ✍ Verification of quantity and weight.

Services

- ✍ Check for packing and shipping marks.
- ✍ Issuance detailed inspection reports covering the materials/ products inspected.
- ✍ Issuance of an inspection certificate covering the materials/ products inspected in case of conformity to the specifications.

4- PHYSICAL & CHEMICAL LABORATORIES SERVICES

COMIBASSAL's laboratories occupy the two units of COMIBASSAL Center in Amria, Alexandria, Egypt.

These laboratories provide essential support services for COMIBASSAL's other inspection and testing activities as well as providing test services for a wide variety of clients in the construction markets, consultation needs and consumer products field.

They are able to apply COMIBASSAL's own experience in sampling, verification and testing as required to meet the clients specification.

The following is a brief summary description of the services rendered by these laboratories which can be divided into two main sections.

a) Physical Center:

Performing the following:

1. Non-destructive testing comprising:
 - ? Reviewing welding procedures through the use of ultrasonic units, gamma rays, as well as magnetic particles and diepenetrant.
 - ? Inspection of casting to expose any flaws not detected by naked eye.
 - ? Determination of thickness of sheets used for construction & pressure vessels.

Services

? Witness testing of welders and checking that they are well qualified for the job.

2. Civil works testing labs, for sand, concrete & gravel.
3. Mechanical testing labs for tensile, bending, and hardness of samples submitted by clients or COMIBASSAL inspectors.
4. Hydrostatic tests for valves, fittings, and pipes.

b) Chemical Laboratories:

Performing the following:

- ? Chemical analysis.
- ? Agro-alimentary analysis.
- ? Water analysis of all kinds.
- ? Microbiological analysis to determine hygienic quality of goods.

- Fees:

Fees for COMIBASSAL inspection and laboratories professional services are appropriate to the technical complexity of the project and are based generally on personal, time factor, transportation, laboratory and testing equipment, plus expenses incurred to accomplish the assignment.