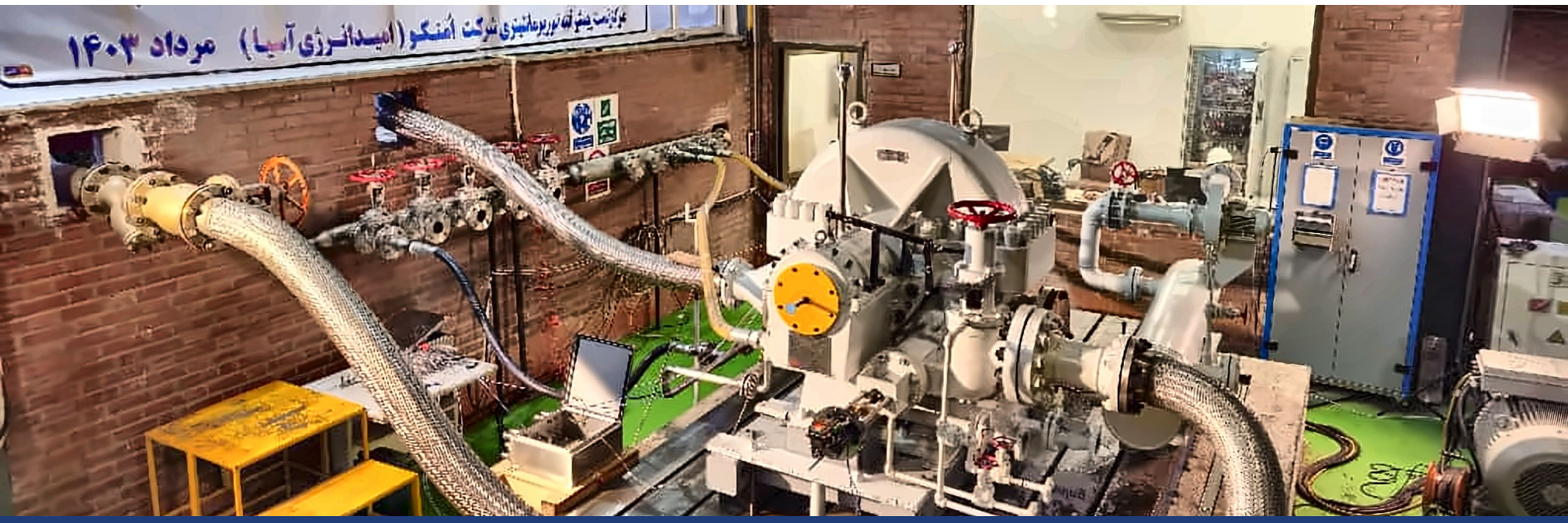
OMENCO
Rotating Toward the Future



Turbomachinery Test Center

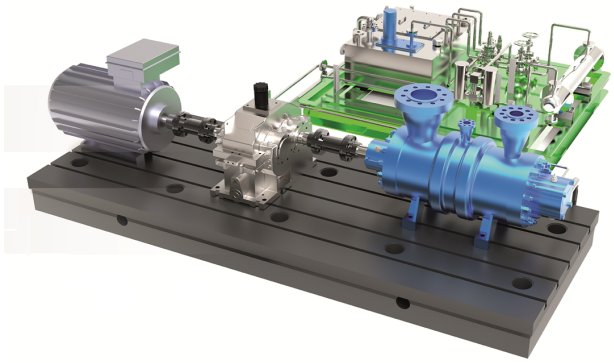
for steam turbines and all kinds of compressors

ABOUT THE TEST CENTER

Prove performance before delivery

OMENCO's advanced test center for string testing of turbines and compressors is built to the platform and standards of **NEWJCM** and **Mitsubishi**. It allows the complete machine train to be run, inspected and verified, both functionally and mechanically, before it ships to the job site.

The center accepts all types of compressors, with turbines or electric motors as drivers, and tests them in accordance with international and factory standards.



Typical string-test arrangement: motor, gearbox and compressor on a T-slot test bed

KEY FACILITIES

Siemens control panels

Siemens control panels with a WinCC operator station for start-up, loading and protection of the machine.

B&K monitoring system

Continuous monitoring of vibration and mechanical behavior while the machine is running.

Shop motor, VFD and gearbox

Used to drive compressors that are tested without their own drive, across the required speed range.

Superheated steam package

Dedicated superheated steam production package for testing steam-turbine drivers.

Shop lubrication system

Main and standby oil pumps, oil filter, oil cooler and related instruments.

Shop closed-loop cooling water

Closed-loop cooling water supply system for the machine under test.

WHO BENEFITS

Manufacturers and packagers
Verify the complete train and see how it behaves before shipment.

EPC and project teams
Witness tests in a purpose-built facility and close out inspection points early.

Plant owners and operators
Reduce commissioning risk by finding problems in the shop, not on site.

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ADVANCED TURBOMACHINERY TEST CENTER
Mechanical Running and Performance Test

FACILITIES AT A GLANCE



Control room: Siemens WinCC and Woodward Peak200



Reciprocating compressor on test bench for MRT and a turbine under final assembly before the test



Packaged compressor under test on the test bed



Calibration and instrumentation bench

TESTS WE CONDUCT

1 Compressor mechanical running test

According to API 617, 618 and 619. Run at operating speeds with bearing temperatures, vibration and lube-oil conditions checked continuously.

2 Compressor performance test

Performance test for compressors only: head, flow, power and efficiency verified against the agreed performance.

3 Complete unit test (string test)

Driver, gearbox and driven machine tested together as one train before the machine leaves the shop.

4 Steam turbine mechanical run test

According to API 611 and API 612. Mechanical run on superheated steam, with speed control and trip response checked through the governor controller.

5 Test with shop motor and VFD

For compressors tested without their own drive: driven by the shop motor and VFD through the gearbox across the required speed range.

6 Vibration and rotor behavior

B&K monitoring of shaft vibration and spectrum to confirm acceptable rotor-dynamic behavior.

7 Overspeed and protection test

Overspeed trip, alarm and shutdown logic verified by Siemens PLC and Woodward Protech GII.

8 Auxiliary systems check

Shop lubrication system and closed-loop cooling water supply checked while the machine is running.

Standards: compressors per **API 617, 618 and 619**; steam turbines per **API 611 and 612**.

Ready to test your machine?

Contact our sales team to discuss your machine, the tests you need and the schedule for your test.

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