



Elmar Pressure Testing Standards

Introduction

The following information explains the standards of Elmar in relation to equipment pressure testing, maintenance levels and the frequency thereof.

Periodic Testing and Maintenance

No test **shall** ever exceed maximum test pressure.

1. The equipment **may** be body tested to its maximum test pressure once every 6 months. This test **may** be witnessed by an independent 3rd party. The equipment **may** be disassembled, cleaned, visually inspected and redressed with **OEM** spares and elastomeric seals prior to this test. All spares used that are listed on the independent review certificate (IRC) **shall** have their material trace numbers (e.g. TN12345) amended in the assembly data book to maintain traceability. All other testing within this period **shall** not exceed maximum working pressure. These pressures can be found within the technical details table shown on the assembly drawing. This drawing can be found within the drawing package that accompanies each order or on the Elmar certification database.
2. The equipment **shall** be body tested to its maximum test pressure once every 12 months. This test **may** be witnessed by an independent 3rd party. The equipment **shall** be disassembled, cleaned, visually inspected and redressed with **OEM** spares and elastomeric seals prior to this test. All spares used that are listed on the independent review certificate **shall** have their material trace numbers amended in the assembly data book to maintain traceability. All other testing within this period **should** not exceed maximum working pressure. These pressures can be found within the technical details table shown on the assembly drawing. This drawing can be found within the drawing package that accompanies each order or on the Elmar certification database.
3. The equipment **shall** be body tested to its maximum test pressure once every 5 years. This test **shall** be witnessed by an independent 3rd party. The equipment **shall** be disassembled, cleaned and returned to bare metal, visually inspected, inspected using MPI or Dye-Pen as appropriate and redressed with **OEM** spares and elastomeric seals prior to this test. The equipment **shall** have a dimensional check. This check **shall** be carried out by the OEM. Any components showing indications of flaws following NDT inspection **shall** be replaced using **OEM** parts. All spares used that are listed on the independent review certificate **shall** have their material trace numbers amended in the assembly data book to maintain traceability. These pressures can be found within the technical details table shown on the assembly drawing. This drawing can be found within the drawing package that accompanies each order or on the Elmar certification database.
4. The equipment **shall** be retired from service on its 20th anniversary to ensure that the collective cycles to test pressure do not become excessive.



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Elmar pressure control equipment is designed following the methodologies described in API6A. These design methodologies are in turn taken from ASME VIII pressure vessel and boiler code and more specifically division II. This methodology mitigates the risk of low cycle rapid fracture through a combination of primary and global stress to yield limitations along with minimum material performance, manufacturing NDT requirements and the adherence to the above, in service maintenance regime to control designs.

Shall – defines an operation or instruction that will be followed without exception.

May – defines an operation or instruction that could legally be required in some countries or locations or by a customer.

Should - defines an operation or instruction that represents sound or good practice.

OEM – Original Equipment Manufacturer which in the context of this document is Elmar.

Note – the above excludes Elmar equipment rated to 30,000psi working pressure which is subject to specific life cycle requirements.

