

PRESSURE VESSEL INSPECTION AND TESTING PROCEDURES

Introduction

Pressure vessels operate under high pressure and temperature conditions, making regular inspection critical for safety. Testing ensures vessels meet design specifications and regulatory requirements.

Background

Pressure vessel failures can result in explosions, toxic releases, and fatalities. Inspection programs follow ASME codes and local regulations to prevent such incidents.

Scope

This procedure covers hydrostatic testing, thickness measurements, internal inspections, pressure relief valve testing, and certification requirements for pressure vessels.

Testing Requirements

- Hydrostatic pressure testing at 1.5x design pressure
- Ultrasonic thickness measurement
- Internal visual inspection using borescopes
- Pressure relief valve calibration
- Documentation and certification
- Re-testing intervals based on service conditions