Chinastandards.org

ICS 75.180.10
CCS E92

SY

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SY/T 10049-2004

Recommended practice for fatigue strength analysis of offshore steel structures

海上钢结构疲劳强度分析推荐作法

(English Translation)

Issued on: July 3, 2004 **Implemented on: November 1, 2004**

Issued by: National Energy Administration

Preview: page 1 of 4 shown, 62 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sy-t-10049-2004

Chinastandards.org

Table of Contents

[Preview only]
1 Scope
1.2 Definition of terms
2 Normative references
2.1 General requirements
2.2 Pressure-drop limitations and piping configurations
2.3 Inlet stresses that originate from static loads in the discharge piping
2.4 Inlet stresses that originate from discharge reaction forces
2.5 Isolation valves in inlet piping
2.6 Rupture disk devices in combination with pressure relief valves
2.7 Process laterals connected to inlet piping of pressure relief valves
2.8 Turbulence in pressure relief device inlets
3 Terms and definitions
3.2 Safe disposal of relieving fluids
3.3 Back pressure limitations and sizing of pipe
3.4 Considerations for pilot-operated pressure relief valves
3.5 Stresses that originate from discharge piping
3.6 Isolation valves in the discharge piping
4 Isolation valves in pressure relief piping
4.1 Determination of relief requirements
4.2 Relieving pressure
4.3 Sizing for gas or vapor relief
4.4 Examples of isolation valve installations
4.5 Sizing for liquid relief: relief valves requiring liquid capacity certification
4.6 Sizing for liquid relief: relief valves not requiring liquid capacity certification
4.7 Sizing for two-phase liquid/vapor relief
4.8 Sizing for rupture disk devices
5 Bonnet or pilot vent piping
5.1 Conventional pressure relief valves
5.2 Balanced bellows pressure relief valves
5.3 Balanced piston pressure relief valve
5.4 Pilot-operated pressure relief valves

Preview: page 2 of 4 shown, 62 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sy-t-10049-2004

5.5 Thickness calculation of planar insulation layer
6 Drain piping
6.1 Installation conditions that require drain piping
6.2 Safe practice for installation of drain piping
6.3 SPM Location and Spatial Requirements
6.4 Other materials
6.5 Transportation, storage and custody of materials
7 Pressure relief device location and position
7.1 Inspection and maintenance
7.2 Proximity to pressure source
7.3 Proximity to other equipment
7.4 Mounting position
7.5 Test or lifting levers
7.6 Heat tracing and insulation
8 Bolting and gasketing
8.1 Care in installation
8.2 Proper gasketing and bolting for service requirements
8.3 Welding
8.4 Quality Control and Inspection
9 Multiple pressure relief valves with staggered settings
9.2 Installation of Mooring Foundation
9.3 Laying of Mooring Lines
9.4 Hook-up of Mooring Lines

1 Foreword

SY/T 10049-2004 was issued by National Energy Administration on 3 July 2004 and has been in force since 1 November 2004.

The SY/T prefix marks a recommended standard. It is not law in itself: it becomes binding when a contract names it, when a regulation or a mandatory standard refers to it, or when a producer declares conformity with it.

The document runs to 62 pages in English translation.

Preview: page 3 of 4 shown, 62 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sy-t-10049-2004

2 Scope Preview

This standard applies to fatigue and fatigue analysis. Recommended practices for conditions see below. Fatigue is designed to ensure that the structure has to meet the requirements of the fatigue life. Obtained by calculating the fatigue life of the structure is in the process of manufacture and use of effective test engineering method basis.

SY/T 10049-2004 falls under ICS 75.180.10, in the field of petroleum and related technologies.

This catalogue holds 482 other SY/T standards in that field.

In this catalogue, SY/T standards carry edition years from 1973 to 2025.

3 About this standard

Sector: Oil & Gas Industry Standard (Recommended)

Issued by: National Energy Administration

English translation: about 62 pages (approximate)

Chinese original: about 92,993 characters

4 Related standards

Standards on related subjects:

SY/T 5164-2016 - Roller cone drill bits

SY/T 5324-2013 - Pre-Stress Insulated Tubing

SY 0007-1999 - Design standard of corrosion control for steel pipeline and storage tank

SY/T 6419-2024 - Use and maintenance of fiberglass tube

SY/T 6325-2024 - Specification for the management of electrical equipment for oil and gas pipelines

SY/T 10032-2024 - General specification for single point mooring systems

5 Classification and status

International classification (ICS): 75.180.10

Chinese Standard Classification (CCS): E 92

Prefix SY/T: recommended standard.

Preview: page 4 of 4 shown, 62 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sy-t-10049-2004