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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Internet of things system for long-distance oil and gas
pipeline-Part 1: General requirements**

面向油气长输管道的物联网系统 第1部分：总体要求

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Table of Contents

Preface... Introduction...

1 Scope...

2 Normative referenced documents...

3 Terms and Definitions...

4 Abbreviations...

5 Overview... This document was proposed and coordinated by the National Technical Committee for Information Technology Standardization (SAC/TC 28).

1 Scope

This document specifies the data collection, edge services, data processing, business applications, human-computer interaction, data Overall technical requirements for transmission, operation and maintenance management, and system security.

This document applies to the planning, design, construction, application and operation and maintenance of the Internet of Things system for long-distance oil and gas pipelines.

This document does not apply to the technical content of industrial control systems for long-distance oil and gas pipelines.

2 Normative references

GB/T 22239-2019

GB/T 37024-2018

GB/T 37025-2018

GB/T 37044-2018

GB/T 41780.1-2022

GB/T 43697-2024

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Long-distance oil and gas pipeline

A pipeline that transports crude oil, natural gas or liquid petroleum products (finished oil)

that have been purified at mines between different areas.

[Source. SY/T 7031-2016, 2.1, modified]

3.2 Station

Facilities and sites for pressurizing, depressurizing, storing, injecting, distributing, metering, heating, cooling or cleaning pipeline oil and gas. [Source. SY/T 7031-2016, 2.9]

3.3 high consequence areas

Areas where pipeline leakage may cause significant adverse impacts on the public and the environment. [Source. GB 32167-2015, 3.8]

3.4 high risk pipeline segment

A section of pipeline with a higher potential for loss as measured by the probability (likelihood) of failure and the magnitude of the consequences.