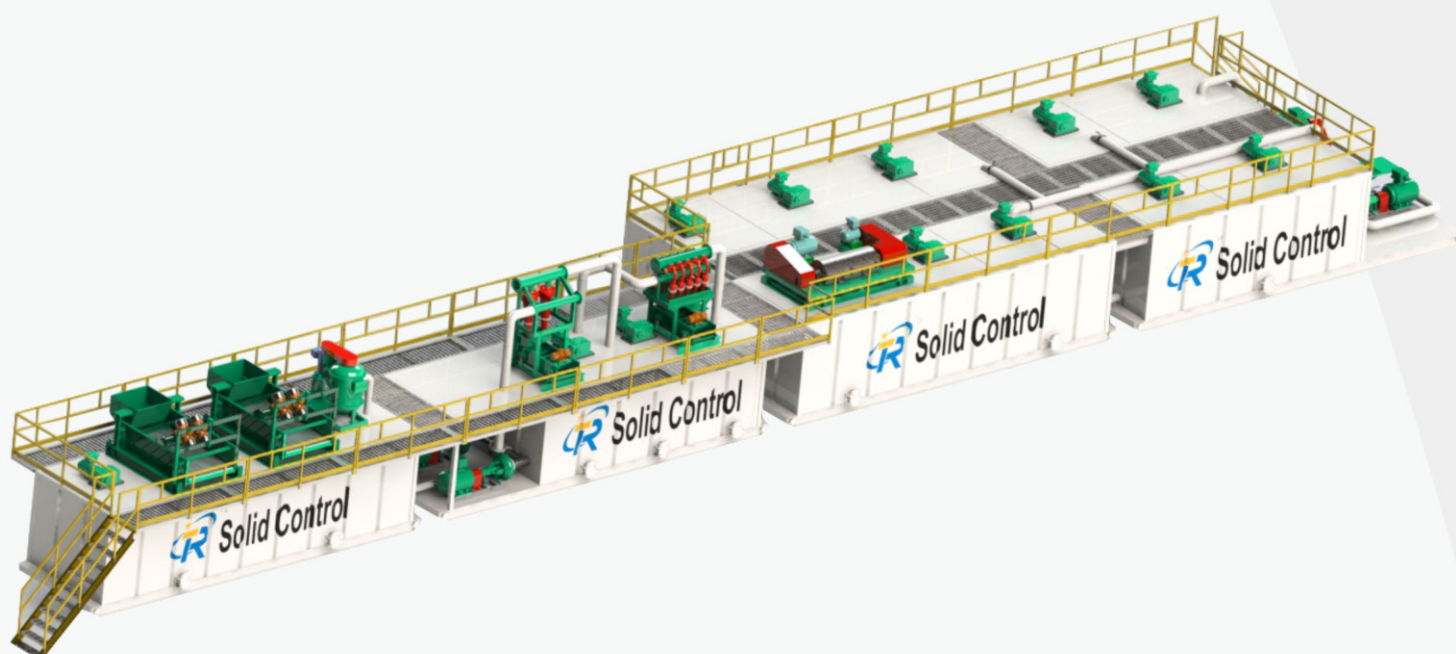


Oil Drilling Solids Control System



Xi'an • China

energy



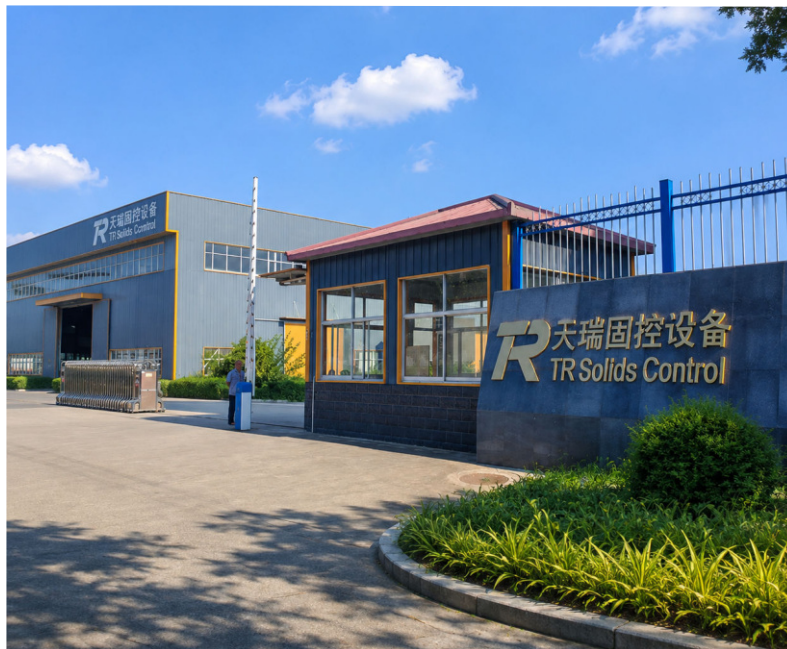
Q1

Registered
Manufacturer

Xi'an Tianrui Petroleum Machinery Equipment Co., Ltd.

About Us

- Established in December 2010, TR Solids Control is a professional manufacturer specializing in the R&D, production, sales and technical service of solids control equipment and mud recovery systems.
- Headquartered in Xi'an Economic and Technological Development Zone, the company covers an area of over 40 acres and employs 350-450 skilled professionals, including a dedicated R&D team of experienced engineers and technical experts.
- TR Solids Control has established a global presence, delivering reliable solutions to over 60 countries and regions across North America, South America, Europe, Asia, the Middle East and Africa.



About Us



Production Capacity

- Our company operates a modern manufacturing base covering a total area of approximately 35,000 square meters, including 22,000 square meters of standardized industrial workshops. We have established independent blanking, machining, welding, assembly, finished product inspection and warehousing & logistics centers, realizing a full-process closed-loop production system from raw material warehousing to finished product delivery.
- We have established a comprehensive quality control system, equipped with high-precision testing equipment such as coordinate measuring machines, ultrasonic flaw detectors, hardness testers and dynamic balance testing machines. All products are inspected in full accordance with international standards.



Company Qualification



Oil Drilling Solids Control System

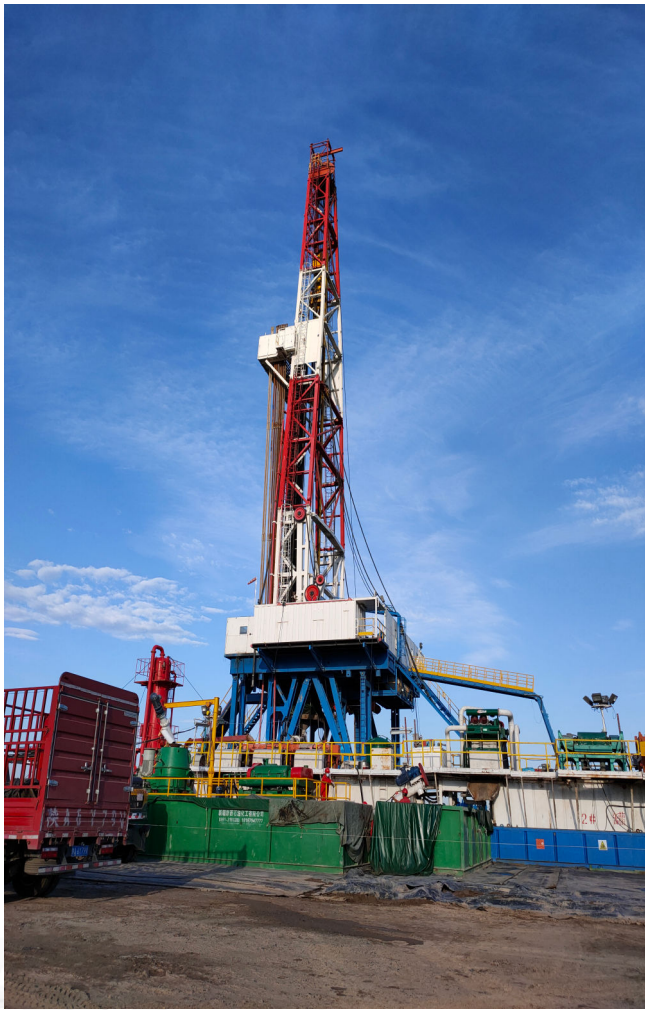
Introduction



- The TR Drilling Fluids Solids Control System is a modular drilling fluid treatment solution integrating mud purification, circulation, storage, and mixing. It is widely used in oil & gas, shale gas, CBM, geothermal, and HDD drilling projects. By combining multi-stage solids control equipment, the system efficiently removes solids of different sizes to maintain drilling fluid performance and improve drilling efficiency.
- The system typically consists of shale shakers, vacuum degassers, desanders, desilters, decanter centrifuges, agitators, sand pumps, shear pumps, mud tanks, and an electrical control system. Standard and customized configurations are available for onshore, offshore, and specialized drilling applications.
- Featuring a modular design, high integration, and intelligent control, the TR system delivers high processing capacity, reliable operation, easy installation and maintenance, reduced mud consumption, longer equipment life, and lower operating costs, providing an efficient and dependable solids control solution for modern drilling operations.



Oil Drilling Solids Control System



Operating Principle

Primary Solids Control – Shale Shaker

Drilling fluid first passes through the shale shaker to remove coarse drill cuttings and large solids, providing the first stage of mud purification.

Secondary Solids Control – Vacuum Degasser

The screened mud enters the vacuum degasser, where harmful entrained gases are removed to restore mud density and ensure stable downstream operation.

Tertiary Solids Control – Desander

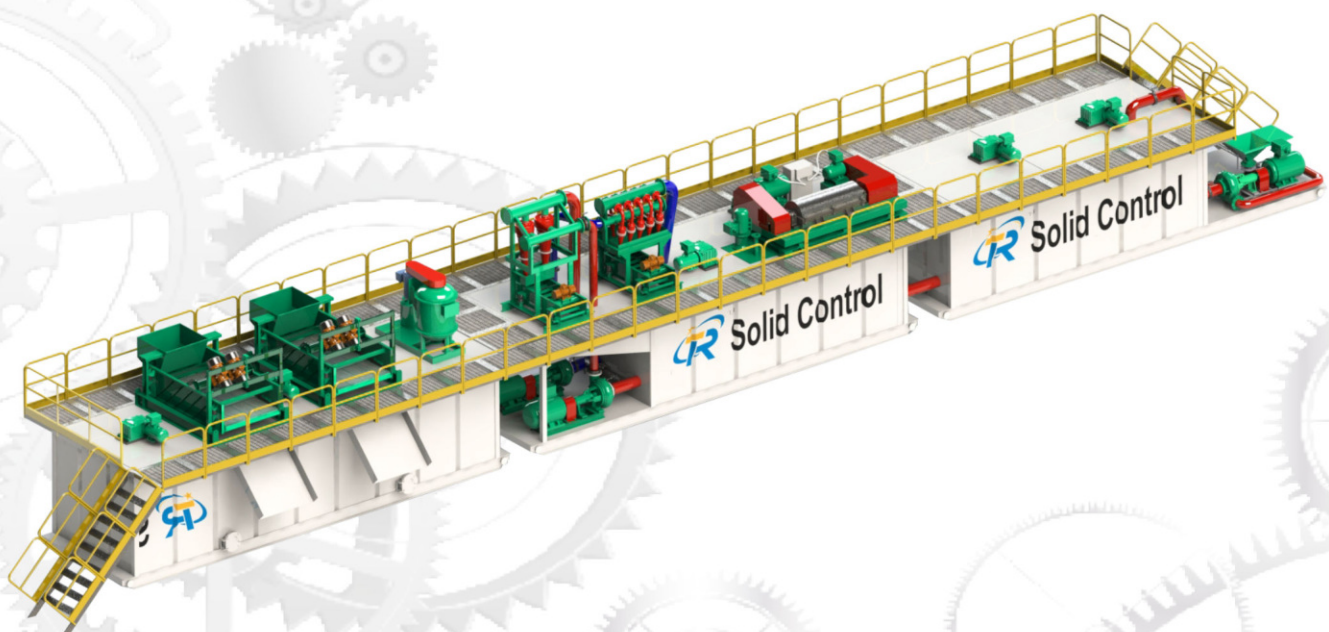
The desander removes 45–74 μm sand and coarse solids by hydrocyclone separation, reducing sand content and improving drilling fluid quality.

Quaternary Solids Control – Desilter

The desilter further separates 15–45 μm fine solids, lowering solids content and enhancing mud rheological properties.

Quinary Solids Control – Decanter Centrifuge (Optional)

Finally, the decanter centrifuge removes 2–15 μm ultra-fine solids and colloidal particles while recovering valuable weighting materials such as barite, providing deep drilling fluid purification.



Oil Drilling Solids Control System

TRZJ Oil Drilling Solids Control Sysatem Features & Benefits

1

Modular Design

Flexible equipment configurations for different drilling conditions and project requirements.

2

Five-Stage Solids Control

Integrated shale shaker, vacuum degasser, desander, desilter, and centrifuge for efficient mud purification.

3

Compact Layout

Highly integrated design minimizes installation space and enables fast deployment.

4

Reliable Operation

Coordinated system operation ensures stable performance and continuous drilling.

5

Intelligent Control

Automated control with real-time monitoring and fault alarms for easy maintenance.

6

Lower Costs & Eco-Friendly

Reduces mud consumption and waste discharge while maximizing mud recovery and lowering operating costs.



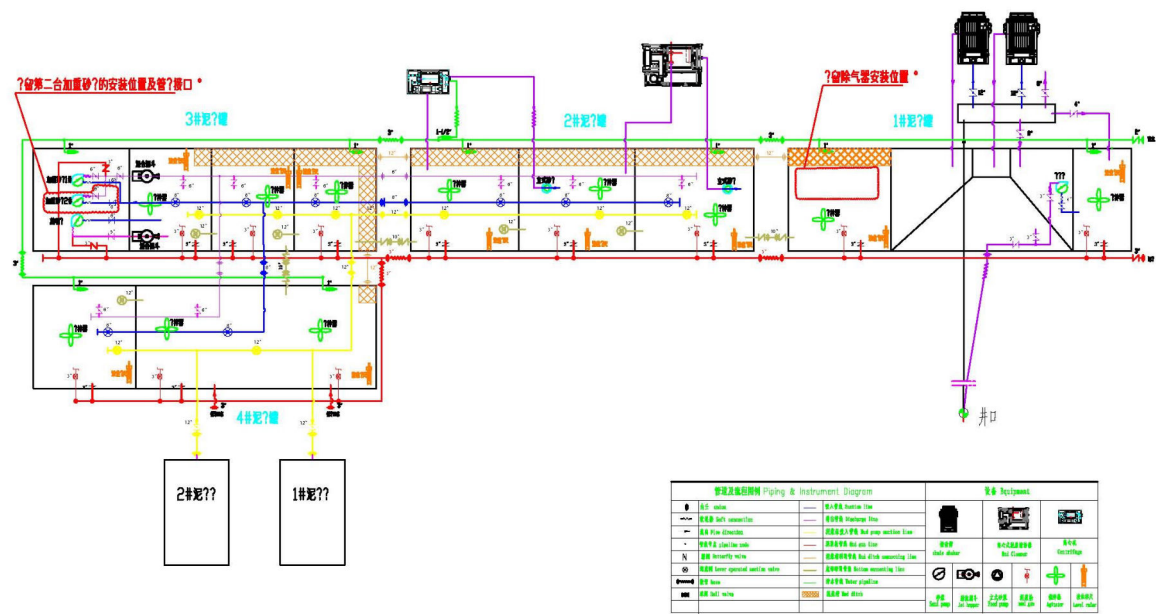
Oil Drilling Solids Control System

- Reference Configuration

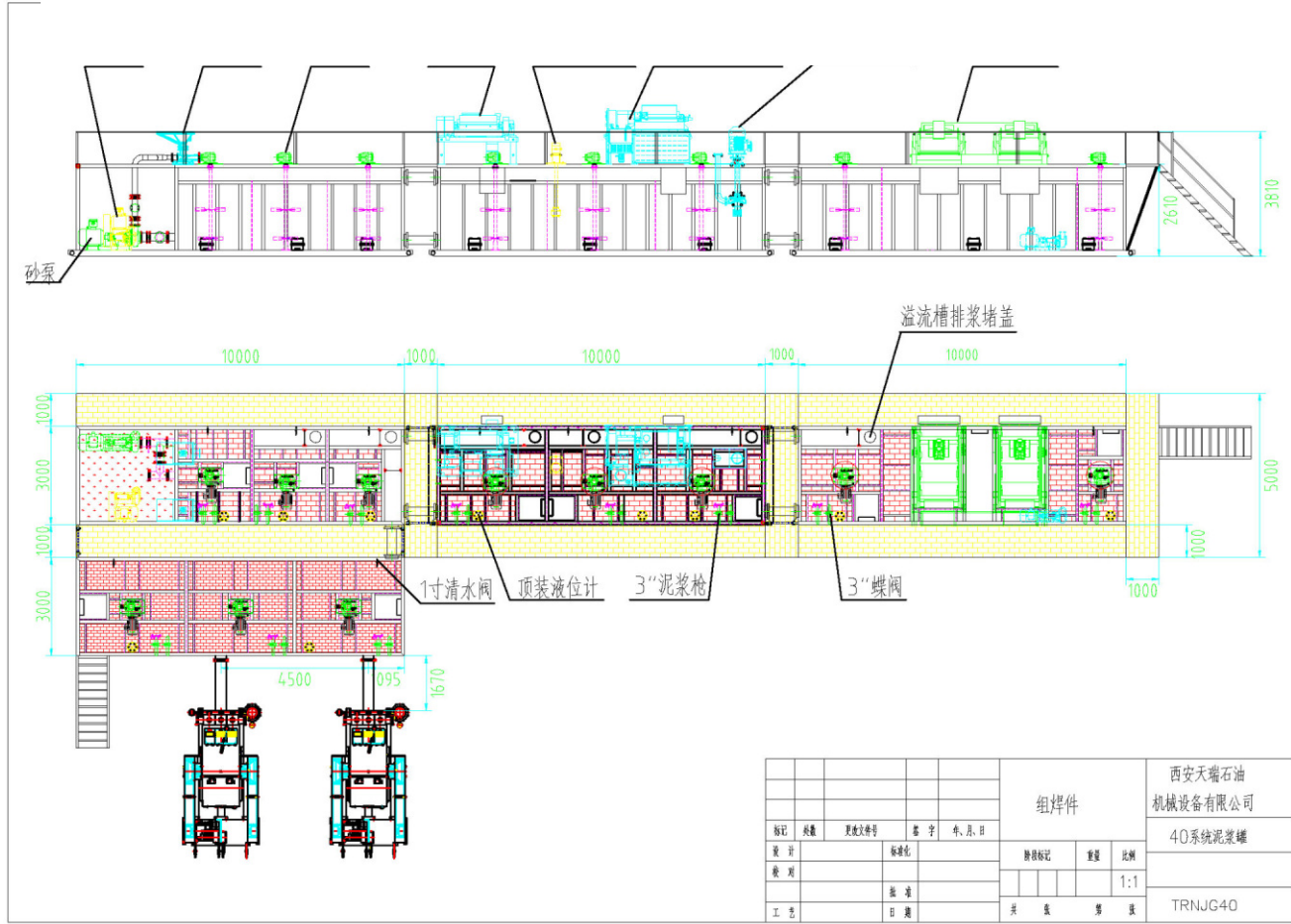
Equipment	ZJ70	ZJ50	ZJ40	ZJ30
Mud Tank	≥270m ³	≥200m ³	≥180m ³	≥160m ³
Storage Tank	≥160m ³	≥120m ³	≥80m ³	≥80m ³
Shale Shaker	≥360m ³ /h	≥280m ³ /h	≥240m ³ /h	≥180m ³ /h
Shale Shaker	360m ³ /h	300m ³ /h	240m ³ /h	√
Desander	≥320m ³ /h	≥240m ³ /h	≥200m ³ /h	≥180m ³ /h
Desilter	≥320m ³ /h	240m ³ /h	≥200m ³ /h	√
Medium-Speed Centrifuge	50m ³ /h	50m ³ /h	40m ³ /h	√
High-Speed Centrifuge	40m ³ /h	40m ³ /h	√	×
Jet Mud Mixing Unit	≥300m ³ /h	≥240m ³ /h	≥200m ³ /h	≥180m ³ /h
Shear Pump	≥120m ³ /h	≥120m ³ /h	≥120m ³ /h	≥120m ³ /h
Centrifugal Pump	≥240m ³ /h	≥200m ³ /h	≥180m ³ /h	≥150m ³ /h

Oil Drilling Solids Control System

TRZJ Series Drilling Fluids Solids Control System Flow Diagram



Drilling Fluids Solids Control System Reference Layout Plan





Xi'an Tianrui Petroleum Machinery Equipment Co., Ltd., established in 2010, is a modern manufacturer of solids control equipment certified to both API Q1 and ISO 9001 standards.

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