

Esimtech

PRODUCE THE BEST SIMULATOR IN THE WORLD
MAKE TRAINING MORE EFFICIENT

MISSION: Assist training • Reduce accidents • Benefit the society
VALUE: Kindness • Integrity • Honesty • Mutual Trust • Win-win
RESPONSIBILITY: Creating value for customers

Belief

We firmly believe that life is above everything else! We respect life, and we follow this spirit throughout the designing, producing and servicing of each product, and enable our clients to get the maximum value and superior experience. We do everything we can to bring safety to every petroleum worker.



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Esimtech was formally established in 2009. Its predecessor was a research group of the School of Computer Science, Southwest Petroleum University. Since the establishment of the research group in 1992, Esimtech has always been committed to the development of simulation training system in the oil and gas industry, and has successively developed more than ten kinds of petroleum engineering simulators. Esimtech also provides customized service such as industrial animation, VR simulation training system and large software system. It has 135 patents, 39 software copyrights, high-tech enterprise certification and other certificates of honor, and has technical achievements with independently intellectual property rights. Today, Esimtech has the most comprehensive product lines and world-leading technological level. Its products have been applied in major training centres of CNPC, SINOPEC and CNOOC, and exported to the major training centers in the UAE, the United States, Mexico, Colombia, Malaysia, Indonesia, Kenya, Venezuela and other countries.

About Us

Timeline

1992

Established research and development team to research and develop drilling simulation training system

1995

Successfully developed DS-1 drilling simulation training system

1997

Successfully developed DS-2 drilling simulation training system

2000

Successfully developed DS-3 drilling simulation training system

2001

Established the Computer Application Technology Research Institute of Southwest Petroleum University

2003

Successfully developed DS-4 type drilling simulation training system

2005

Successfully developed DS-5 drilling simulation training system

Successfully developed DS-6 drilling simulation training system

2006

Successfully developed DS-7 drilling simulation training system

Successfully developed down hole operation simulation training system

2007

Established Petroleum Engineering and Computer Simulation Technology University Key Laboratory of Sichuan Province

Successfully developed DS-9 drilling simulation training system

2008

Successfully developed logging simulation training system

2009

Established Chengdu Esimtech Petroleum Equipment Simulation Technology exploitation Co., Ltd

Successfully developed DS-8 drilling simulation training system

2010

Successfully developed fracturing and acidizing simulation training system

2011

Successfully developed oli and gas production simulation training system

Successfully developed land rig insrallation simulation training system

2012

Successfully developed logging simulation training system

Successfully developed top drive training room simulation training system

Successfully developed DS-11 drilling simulation training system

2013

Successfully developed non-sequence drilling simulation training system

2014

Successfully developed portable snubbing simulation training system

Successfully developed full size snubbing simulation training system

2015

Successfully developed oli recovery standardized training system

Successfully developed open well logging simulation training system

2016

Company name changed into Chengdu Esimtech Petroleum Equipment Simulation Technology Co., Ltd

Successfully developed oli recovery standardized training system

Successfully developed emergency exercise VR coordinated training system

2017

Successfully developed coiled tubing simulation training system

2018

Successfully developed drilling emergency practice training platform

2019

Established the Information Intelligence Department, dedicated to providing services for oilfield informatization construction.

2022

Successfully developed Snubbing Joint Detection and Data Acquisition System

2023

Successfully Developed Valve Lifecycle Management System

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Product Overview

Product Series



Features

Comprehensiveness the most comprehensive product series in the world's petroleum simulation training industry	Customization customized software and hardware	Preciseness precise mathematical and physical model
Service timely and considerate after-sales service	Reliability stable and reliable software and hardware	Reality highly realistic 3D scene display

Qualification Certificates

135

Patent

39

Copyright

7

Qualification Certificates

Drilling and Well Control

Full Size Drilling Simulator

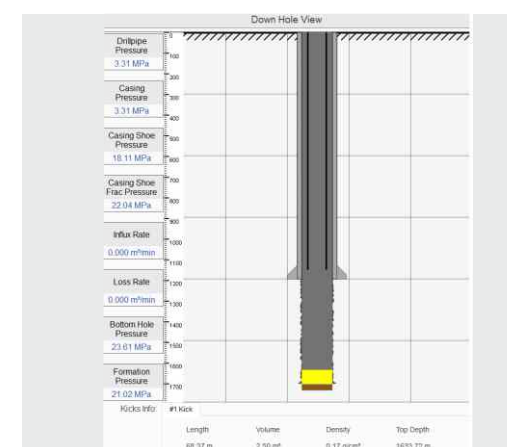


Function

Full size drilling simulator can provide training for different posts, such as driller, assistant driller, supervisor, drilling engineer, etc. This simulation training can enable candidates to master the skills of conventional/unconventional well killing, soft/hard shut-in and down hole problems judging and handling.

Training Items

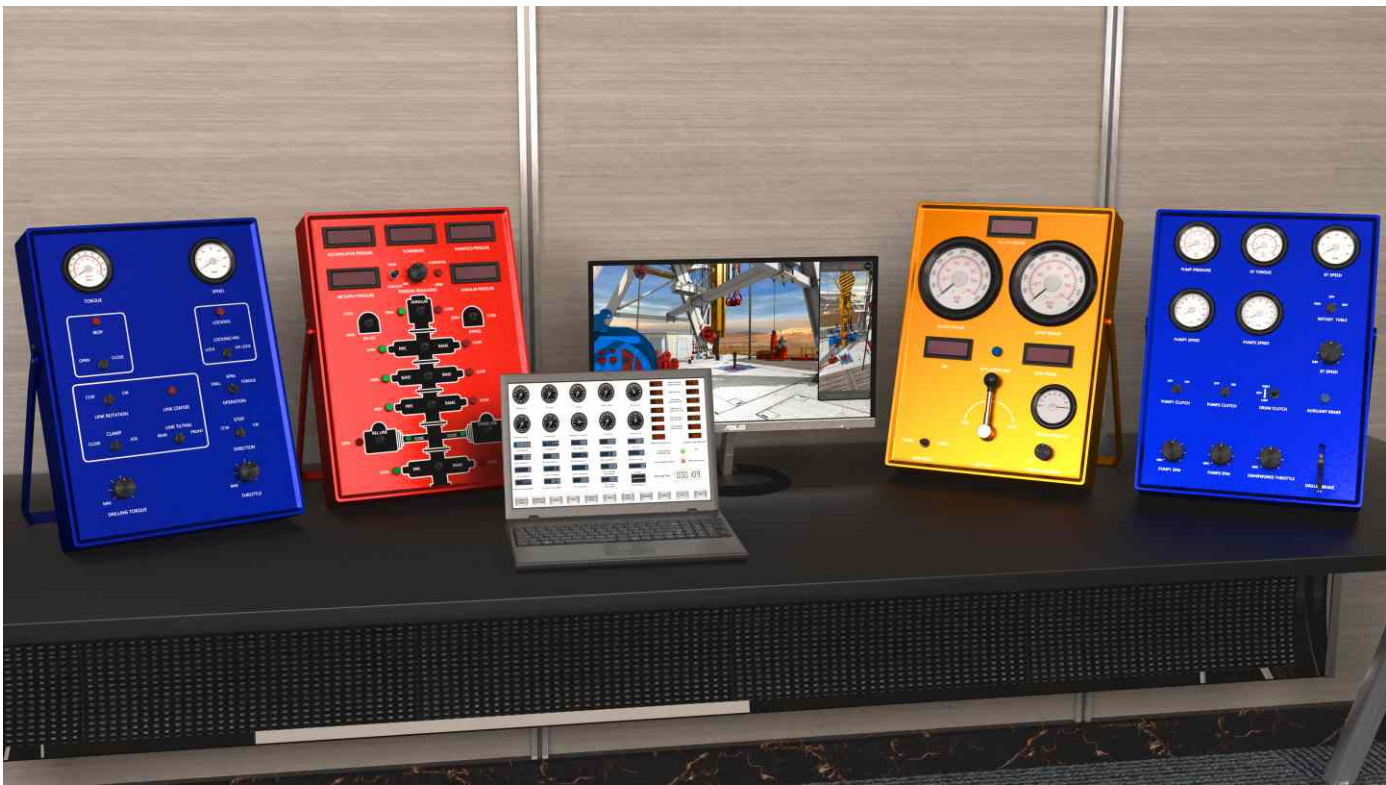
- Preparation
- General Operation
- Shut-in Operation
- Well Killing Operation
- Cementing
- Judging and Handling of Down Hole Problems



◉ Portable Well Control Simulator

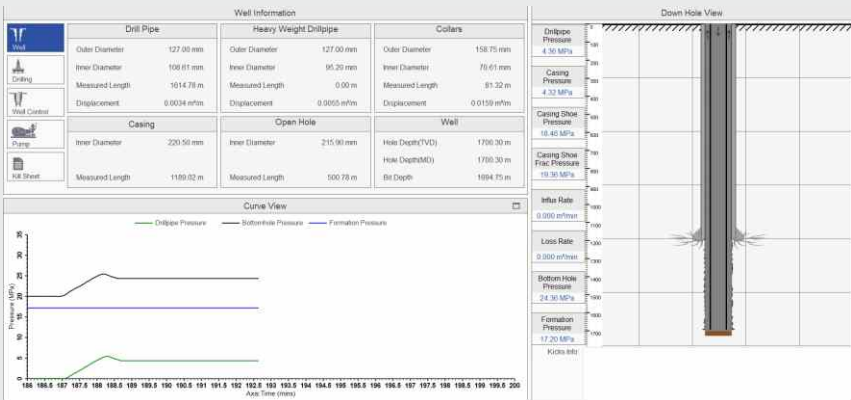
Function

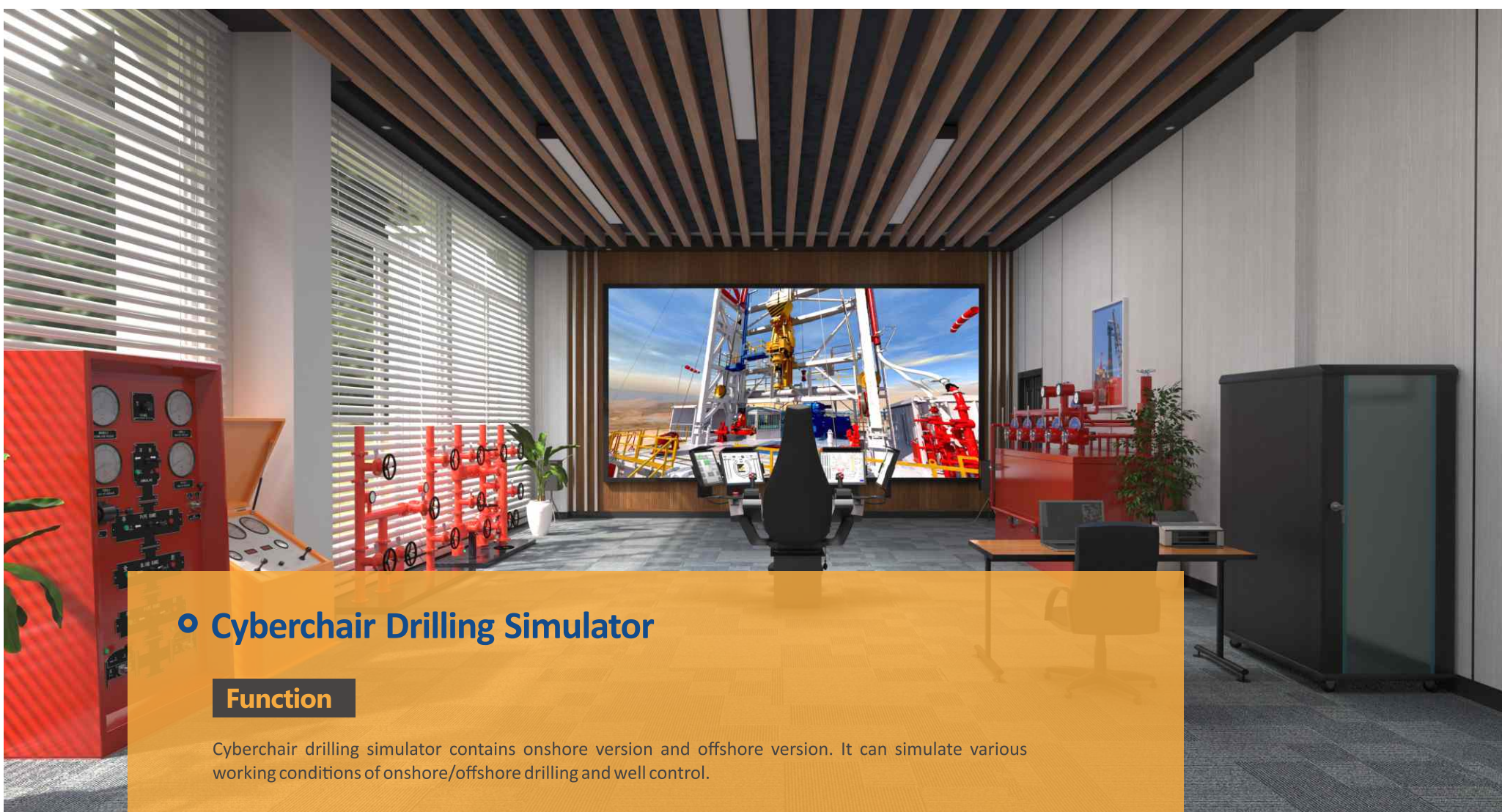
Portable well control simulator can provide training for different posts, such as driller, assistant driller, supervisor, drilling engineer, etc.The simulation training can enable trainees to master the skills of soft/hard shut-in, and conventional/unconventional well killing.



Training Items

- Preparation
- General Operation
- Shut-in Operation
- Well Killing Operation





• Cyberchair Drilling Simulator

Function

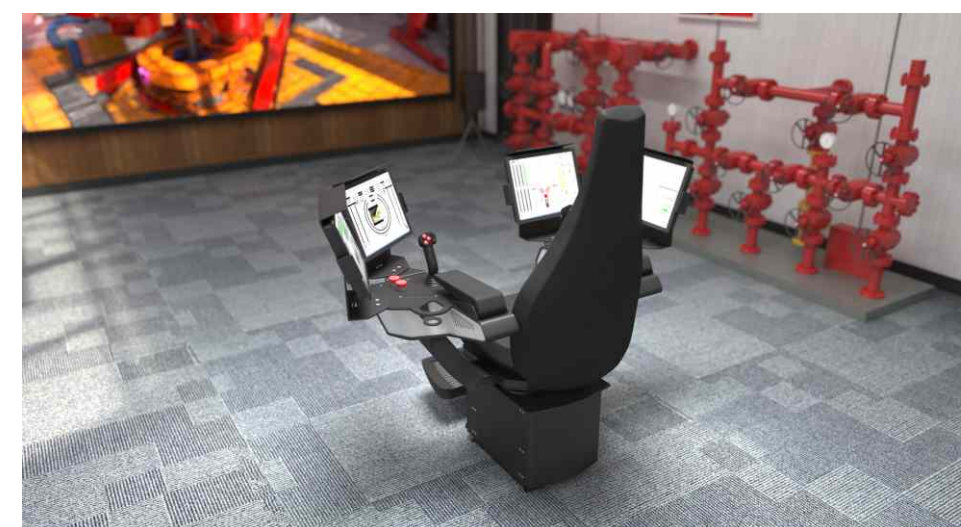
Cyberchair drilling simulator contains onshore version and offshore version. It can simulate various working conditions of onshore/offshore drilling and well control.

Training Items (Onshore)

- Preparation
- General Operation
- Cementing
- Shut-in Operation
- Well Control Operation
- Judging and Handling of Down Hole Problems

Taining Items (Offshore)

- Preparation
- General Operation
- Cementing
- Shut-in Operation
- Well Control Operation
- Judging and Handling of Down Hole Problems



Top Drive Simulator



Function

Top drive simulator is developed aiming for training the operation of top drive device. It can provide training items of all top drive operation and common problems handling.

Training Items

- 3D Animation Display of Top Drive Working Principle
- Step-by-step Working Mode
- Non-sequence Operation Mode
- Problem Treatment



Land Rig Installation Simulator

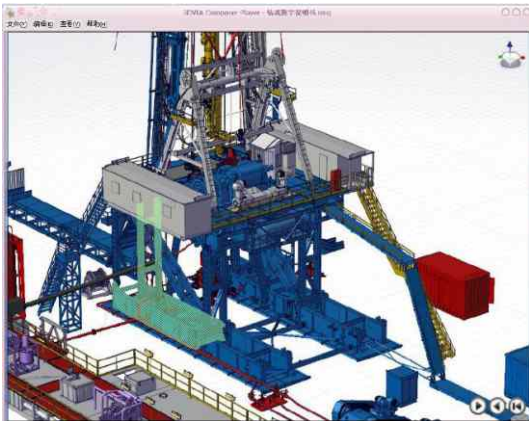


Function

Land rig installation simulator is the combination of petroleum engineering technology, computer technology and virtual reality technology. It is mainly used for training new workers, drillers, assistant driller, technicians, and driller supervisor, etc. The simulator can provide trainings as the land rig installing whole process and notes, land rig derrick and substructure raising and lowering, rig tripping in and out, drilling operation, top drive operation, rig construction, etc.

Training Items

- Rig Installing Whole Process Training Operation
- Rig Installing Virtual Assembly Operation
- Raising and Lowering Operation



Downhole Operation

Full Size Workover Simulator

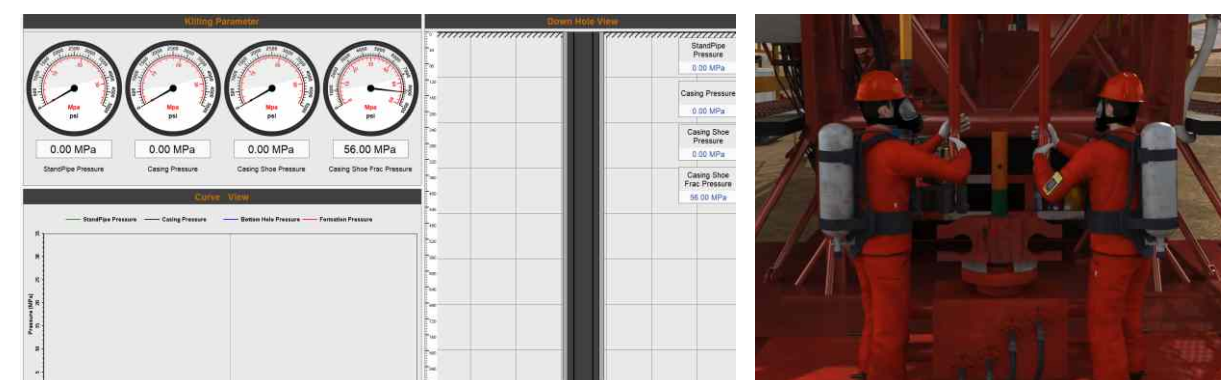


Function

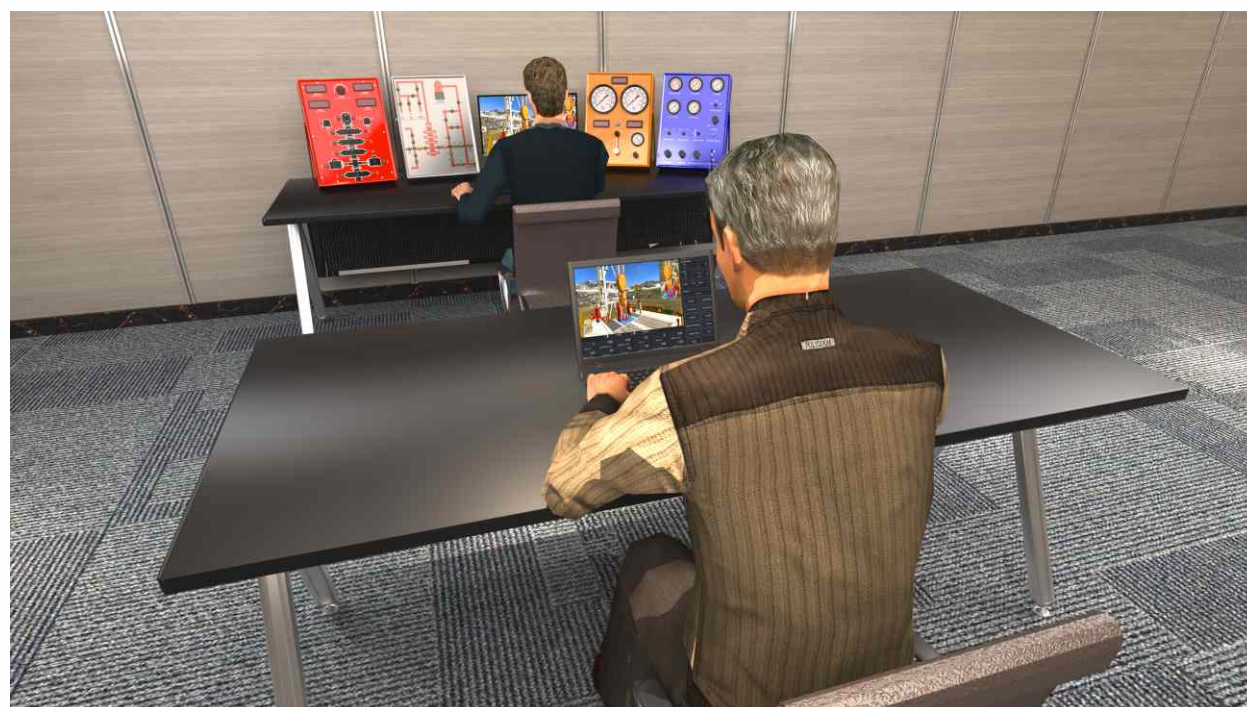
Full size workover simulator can provide training for different posts such as driller, assistant driller, drilling crew technician, drilling supervisor, etc. The simulation training can enable trainees to master the skills of soft/hard shut-in, and conventional/unconventional well killing.

Training Items

- Primary Workers Operation
- Well Killing
- Shut-in Operation
- Intermediate Workers Operation
- Animation Display
- Senior Workers Operation



◉ Portable Workover Simulator



Function

Portable workover simulator can provide training for different posts such as driller, assistant driller, drilling crew technician, drilling supervisor, etc. The simulation training can enable trainees to master the skills of soft/hard shut-in, and conventional/unconventional well killing.

Training Items

- Shut-in Operation (Major Workover)
- Without Drilling Platform (Minor Workover)
- Well Killing Operation



◉ Fracturing and Acidizing Simulator

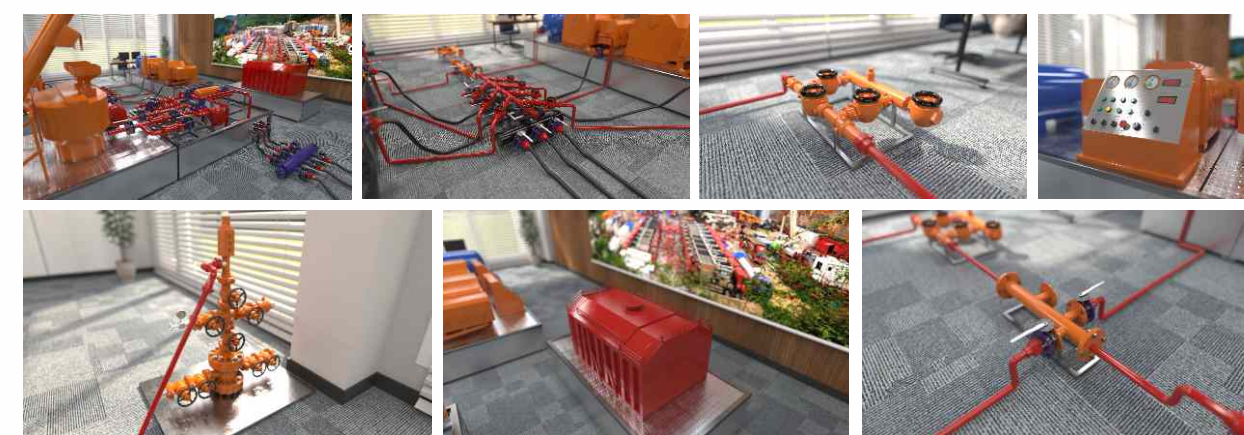


Function

Fracturing and acidizing simulator can enable trainee to master the operational method of the devices, and learn the process of fracturing and acidizing and common treatment of fracturing problems.

Training Items

- Fracturing Equipment Operation
- Preparation before Fracturing
- Fracturing Process
- Fracturing Problem Handling and Analysis

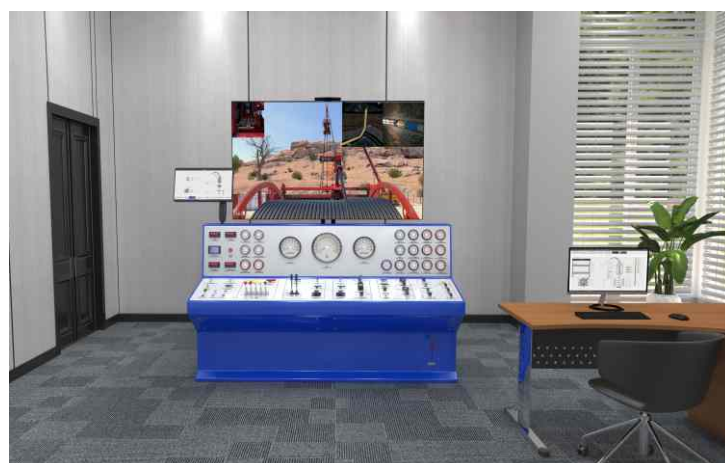


Well Intervention

Full Size Coiled Tubing Simulator

Function

Full size coiled tubing simulator can provide the common downhole operation and accident treating training items such as drilling bridge plug, sand washing, gas-lift discharge, etc. Through the training with the simulator, trainees can master the basic operation of coiled tubing, common technology process of coiled tubing and common problems treating in the process of coiled tubing.



Full size coiled tubing console

Training Items

- Pulling and Running Tubing
- Engine Control
- Reel Control
- Injector Control
- BOP Control
- Stripper Control
- Drilling Bridge Plug
- Sand Washing
- Gas Lift Discharging
- Switch on/off Sliding Sleeve
- Plug Fishing
- Judgement and Handle of Downhole Problems or Incidents
- Well Control
- Fatigue Life Analysis

Portable Coiled Tubing Simulator

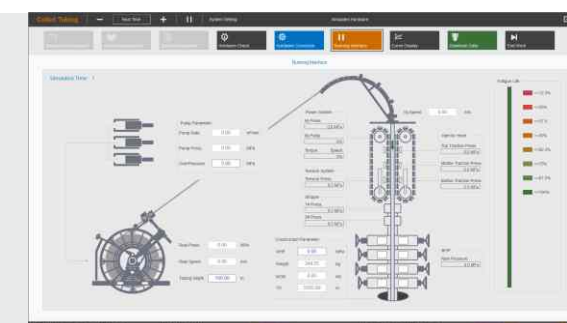


Function

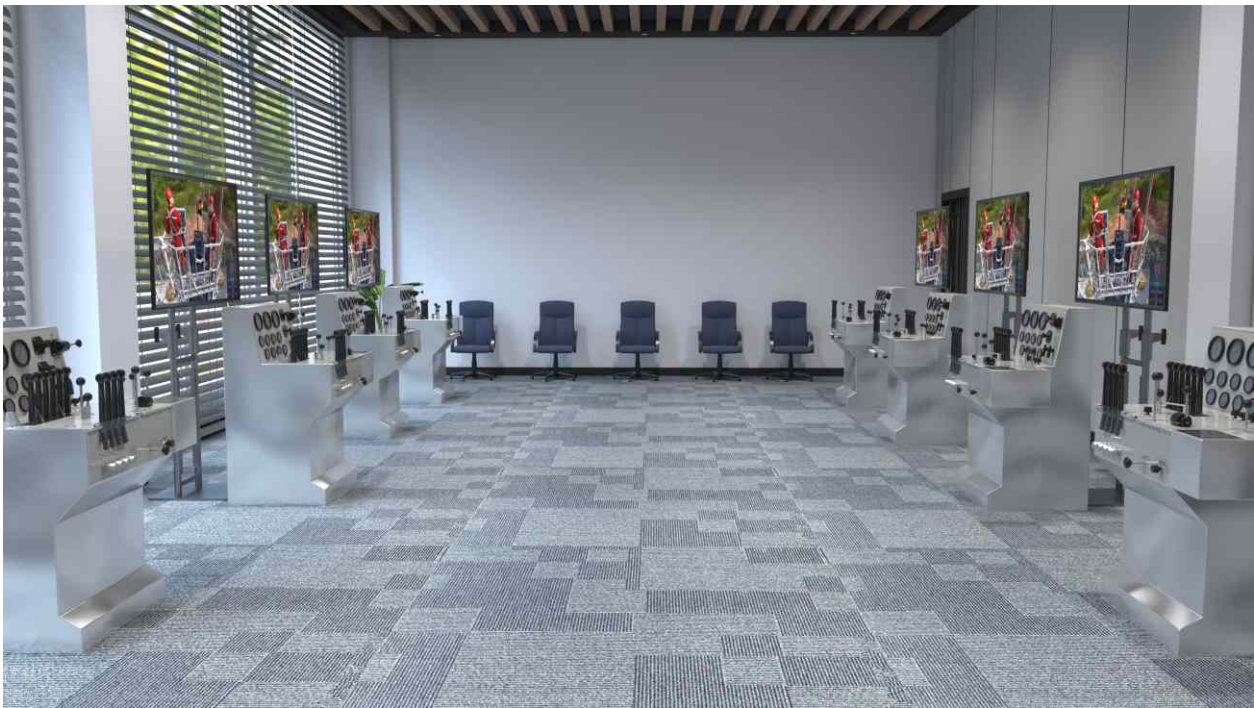
Portable coiled tubing simulator is mainly used to train new staff, coiled tubing operator, coiled tubing operation team leader, etc. Through the training of this system, trainees are able to master the basic method of operating coiled tubing, common technology process of coiled tubing operation, common trouble and problems treatment, etc.

Training Items

- Pulling and Running Tubing
- Injector Control
- Drilling Bridge Plug
- Engine Control
- Reel Control
- BOP Control
- Stripper Control



Full Size Snubbing Simulator



Function

Full size snubbing simulator can simulate the operations such as running and pulling tubing and other tools with pressure, and can present the operation and motion of key tools in snubbing operation. Through the training provided by this simulator, trainees can master the basic methods of snubbing driller operation and the technological process of snubbing operation.

Training Items

- Calculating Balance Point and Unsupported Length
- Pulling and Running Tubing
- Pulling and Running Tools

Portable Snubbing Simulator

Function

Portable snubbing simulator can simulate the operations such as running and pulling tubing and other tools with pressure, and can present the operation and motion of key tools in snubbing operation. Through the training provided by this simulator, trainees can master the basic methods of snubbing driller operation and the technological process of snubbing operation.



Training Items

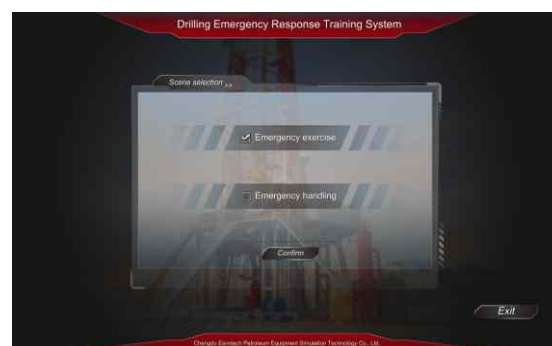
- Calculating Balance Point and Unsupported Length
- Pulling and Running Tubing

Emergency Exercise

Drilling Emergency Exercise Software Platform

Function

Drilling emergency exercise software platform is a set of software for drilling practitioners to improve their capability of emergency management and it can be used for training and assessment of emergency exercise. This system, taking the emergency disposal of typical accidents in drilling operation as the core and based on the emergency plan for drilling emergencies, simulates the process of drilling emergency exercise, receives the emergency handling operation of the trainee, and judges the personnel's disposal operation according to the emergency plan. Through the system, the trainees can correctly prejudge the on-site situation, participate in the training of emergency handling and emergency escape in the face of drilling accidents, thereby improving the personnel's emergency response capability.



Training Items

- Out-of-control Blowout
- Fire and Explosion
- Knowledge and Skill of Emergency Handling
- Hydrogen-Sulfide Leakage and Toxicosis
- Comprehensive Exercise

Drilling Emergency Practice Platform

Function

This is the first petroleum emergency practice training platform combining the technologies of "Internet of Thing" and "Internet plus". The system is setup on a real drilling platform, making up a vivid and stunning simulation scene on the premise of safety securing. It provides the best exercise experience for trainees, and create a fixed impression of emergency handling on their mind.

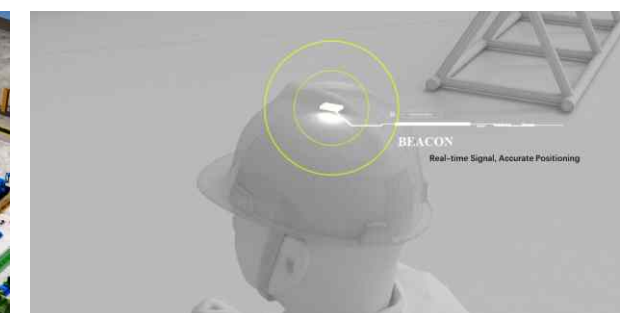


Training Items

- Out-of-control Blowout
- Fire and Explosion
- Practice Procedure
- Hydrogen-Sulfide Leakage and Toxicosis
- Knowledge and Skill of Emergency Handling



Real-time location



Beacon



Pre-training instruction
Incident scenes initialization

Presenting real-time exercise
Instructor can intervene
in the exercise

Automatic assessing system
Manual auxiliary assessing

Exercise process
playback

Upload exercise results to
educational administration
system

Production and Transportation

Oil Recovery Simulator

Function

It can provide training for primary workers, intermediate workers, senior workers, technicians, senior technicians, etc. The training provided by this system make the students master theories of various oil recovery devices and usage, as well as the method of treating common problems.

Training Items

- Rod-pumped well opening /shutting in
- Checking pump condition by building pressure of screw pump well
- Electric submersible pump well washing
- Single well gauging operation
- Water injection positive /inverse injection
- Electric submersible well opening/shutting in
- Starting furnace operation
- Adjusting water injection volume
- Rod-pumped well washing
- Screw pump well opening /shutting in
- Wellhead fault judging and removing
- Washing gauging and separating device
- Water injection process fault judging and removing
- Screw pump well washing
- Gauging station fault judging and removing
- Building pressure of rod-pumped well wellhead



◉ Gas Production Simulator



Function

Gas production simulator can enable trainees to master the inner structure of various gas production equipment and its working theories, typical stations and process. It provides various layers of training, which satisfies the training requirement of primary workers, intermediate workers, senior workers, technicians and senior technicians. The training provided by this system makes students master the theories of various gas production devices and usage, as well as the method of treating common problems.

Training Items

- Flowing well startup and shutting in
- Treatment of natural gas leaking
- Electrical submersible pump dewatering startup and shutting in
- Plunger pump dewatering well startup and shutting in
- Injecting anti-freezer
- Natural gas venting operation
- Starting and shut down furnace
- Gas well single well metering
- Natural gas dehydrating operation
- Pig receiving and launching operation

◉ Oil and Gas Gathering and Transportation Simulator



Function

Oil and gas gathering and transportation simulator can enable trainees to master the inner structure and working theories of the devices, learn the typical stations and process of this section. Through the training and test of this system, students can master the working theories and usage of various devices and can treat the common problem well.

Training Items

- Natural Gas Boosting and Distribution Simulation
- Crude Oil Long-Distance Transportation
- Joint Station
- LNG Receiving Station
- Refined Oil Depot

Wireline Logging

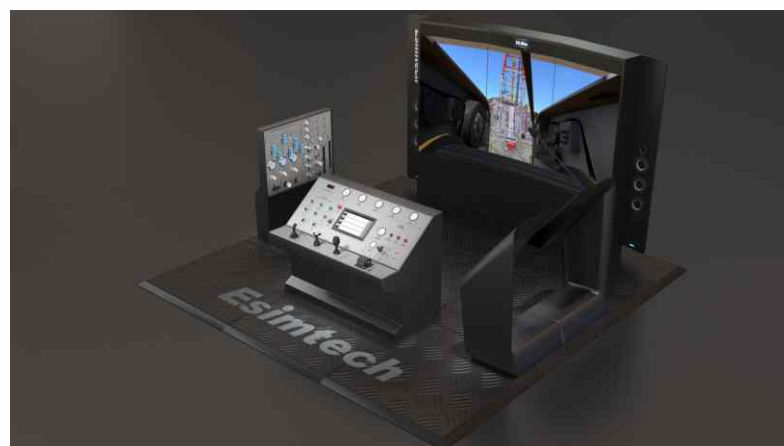
◉ Openhole Well Logging Simulator

Function

Openhole logging simulator can display the structure and working principle of logging devices, and the whole process from logging preparation to the end. The system can complete the training and testing of logging operation for logging technicians.

Training Items

- Wellhead Worker
- Winchman
- Surface Unit Operator
- Animation



◉ Production Well Logging Simulator



Function

Production well test simulation training system takes the advantage of computer simulation and virtual reality, network technology, graphics technical, multi-media technical and well logging theory to solve the problem of pre-post training and skill evaluation of well logging technicians and workers and make training and evaluation keep step with the technology development and production demand.

Training Items

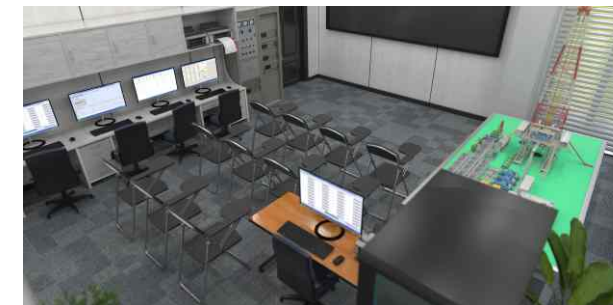
- Wellhead Workers Operation Training
- Drawworks Worker Operation Training
- Operator Operating Training
- 3D Animation of Well Logging
- Theoretical Training and Online Examining of Well Logging



◉ Compound Logging Simulator

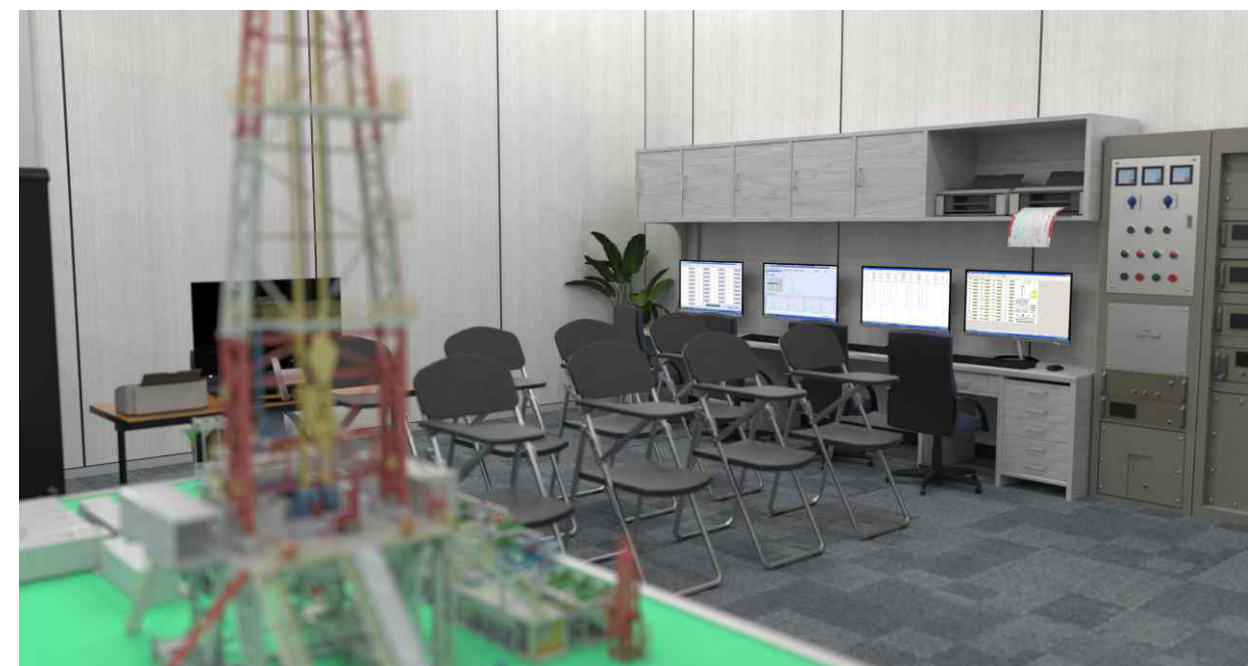
Function

Compound logging simulator adopts full size logging equipment room, sand table well site model, sensor models, advanced logging software, drilling accidents modeling software and sensor detecting software designed by Esimtech. It presents the whole process of compound logging. Through the training of this system, trainees can master various operation skills and experience of treating drilling problems.



Training Items

- Tripping in
- Monitoring Circulation and Static State
- Incidents When Drilling and Reaming
- H2S Detection
- Monitoring Formation Pressure
- Damper Failure



Virtual Reality (VR)

• Device Virtual Assembly

Function

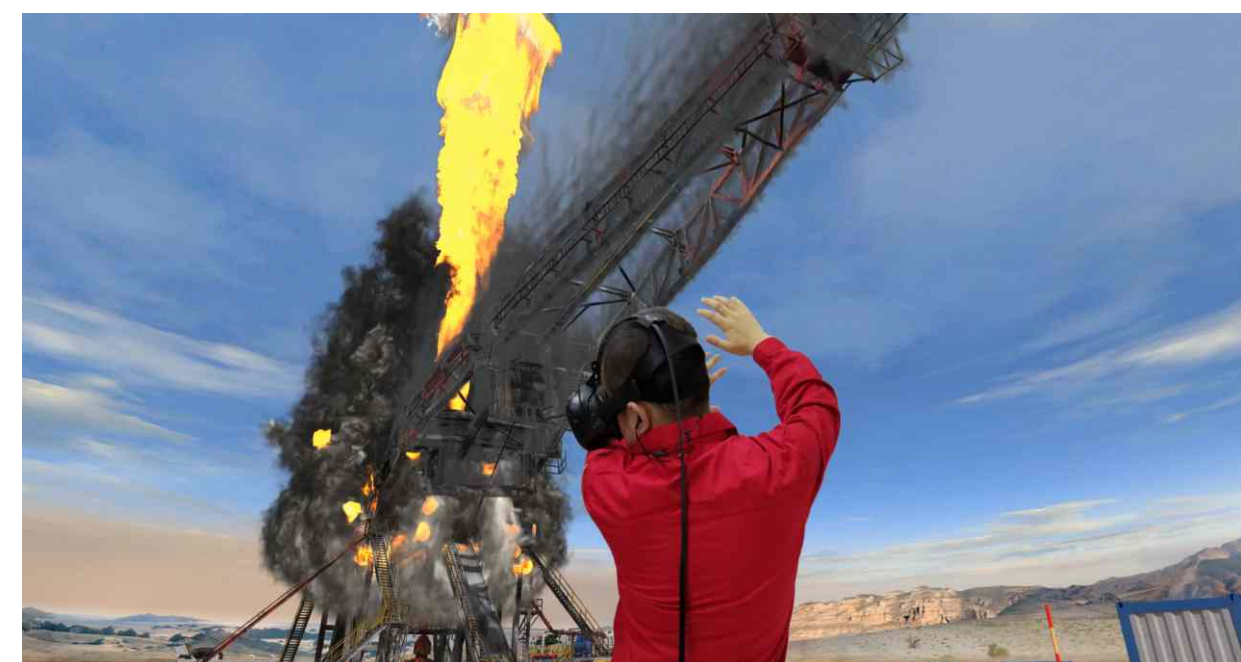
Through the immersive experience by virtual reality, trainees can targetedly learn the inside structure, working principle and assembly method of drilling and well control device. As a result, trainees can get familiar with the device components and principle, and are able to analyze the working condition and remove fault.

Feature

Provide customized services, including but not limited to the displayed items.



• Emergency Exercise (VR)

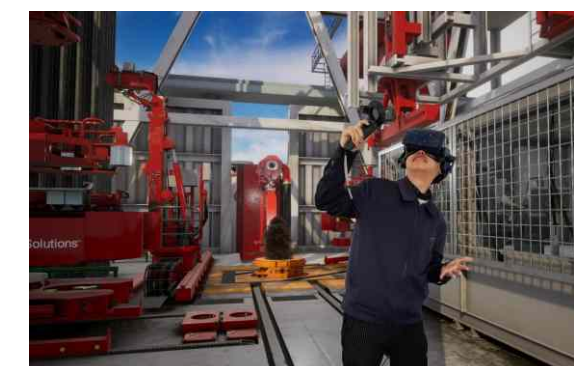


Function

Emergency exercise (VR) is developed based on emergency exercise software platform, used to train and test drilling emergency exercise. Through VR interactive and immersive experience, trainees can cultivate their mental quality in front of an incident. Through the training and test of this system, trainees can complete the training of pre-judge drilling emergency, handle an emergency and emergency escape.

Feature

- Out-of-control Blowout
- Hydrogen-Sulfide Leakage and Toxicosis
- Comprehensive Exercise
- Fire and Explosion
- Knowledge and Skill of Emergency Handling



Industrial Animation

◉ Snubbing Simulator (MR)

Function

Snubbing simulator (MR) combines the full-size drilling snubbing simulator with VR technology. Combination of virtual and reality training environment enables trainees to completed the training items such as running and pulling tubing, tools, etc. and master the basic snubbing operation and common snubbing technology process.



Training Items

- Calculating Balance Point and Unsupported Length
- Pulling and Running Tubing
- Pulling and Running Fittings
- Problem Simulation Training
- Fault Simulation Tools

Function

Industrial animation can specifically display the internal structure, working principle and disassembly process of drilling and well control devices and tools. It can help trainees to get familiar with the composition and principle of devices, master the skills of inspecting and debugging, learn to analyze and judge working condition to troubleshoot timely.

Feature

Provide customized services, including but not limited to the displayed items.

