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MISSION: Complete Solutions for Smart High Pressure Flow Equipment

VISION: To be a Global Leading Manufacturer of Flow Equipment

Core Competence: Swift, Professional, Reliable, Customer-oriented



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# FRACTURING PRODUCTS

Complete Solutions for Smart High Pressure Flow Equipment



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#### **NEWAY OIL EQUIPMENT**

In order to implement its global strategy, NOE has production bases in China and Vietnam. Our China operation also includes a casting plant, forging plant and a Research and Development center.SAP and MES systems are utilized to control the traceability and status flow of all products during the manufacturing process.







#### **OVERSEAS BRANCHES**

NOE has established strategic partnerships with overseas agents and distributors to accommodate product shipment to the Middle East, Asia, Europe and America.















#### **QUALITY CONTROL OF RAW MATERIAL**

NOE understands that consistently producing high quality castings and forgings is the single most important factor in maintaining product integrity and assuring long term, trouble free, safe service. NOE has been audited, certified, and approved by many end users Quality Assurance programs.



**Split Frame Hydraulic Press** 



**CNC Ring Squeezer** 



Regenerative Gas Forging Furnace

#### **ADVANCED MANUFACTURING**

NOE operates many CNC (computer numerical control) centers as well as horizontal and vertical lathes and drilling machines in its manufacturing facilities. The equipment is directly linked to NOE's ERP management system to significantly improve processing, quality and production.







**CNC Centre** 



**Boring Machine** 

# **PARTIAL PRODUCT SHOW**



#### **Description**

The high- and low-pressure manifold is skid mounted and composed of both high- and low-pressure modules. It is designed to meet the requirements of multiple fracturing operations simultaneously.

#### **Product Parameters**

- Working Pressure: 15000PSI TO 20000PSI
- Main Bore ID: 4-1/16" 5-1/8" 7-1/16" Side Outlet: 3-1/16"
- Working Temperature: K,L,P,R,S,T,U,V (-60℃ 121℃)
- Material Class: AA FF
- Product Specification Level: PSL1-PSL3
- Performance Requirement: PR1
- Applicable Working Condition: Fractive liquid, fracture sand, acid, water, etc.
- Applicable Standard: API 6A 21st edition





Fracturing project in Sichuan

## **Product Reliability**

- 1 All components of high pressure manifold use high -strength high -quality alloy steel with high forging ratio. The body of low pressure manifolds is made of overall Austenite stainless steel, which has excellent corrosion resistance and reliable low -voltage carrying capacity.
- 2 All metal sealing ring grooves in high pressure manifolds have Inconel 625 overlay. All components that are highly brushed frequently will have overlay with hard alloys.
- 3 All the bolts of the flange connection in the high pressure manifolds are tightened by high -quality threading tight glue, and we use hydraulic wrench to tighten them, to provide a safety guarantee for high pressure fracturing operations.
- 4 The connections of low pressure manifolds can be equipment with different union models as per the actual requirement by customer.

The fracture manifold can be customized according to the on -site needs.

#### **Design Features**

#### **High-pressure Manifold**

- Have fixed support, convenient for hanging and transportation.
- According to the overall displacement requirements, the diameter design is recommended to meet the maximum displacement, and it is recommended to choose a single channel structure.
- The quantity of high pressure inlet is designed as per the quantity of fracture equipment, and equipped with plug valve or swing check valve along with height adjustable support for easy maintenance.
- The high pressure connection needs to be matched to the outlet of the fracturing equipment, and conversion
  joints can be added if required.
- Equipment has adequate space for maintenance and greasing. The whole package has pressure relief interface and pressure transfer interface, interface form in line with customer requirements.

#### **Low-pressure Manifold**

• The low pressure manifold is designed according to the discharge requirements of fracturing equipment and sand mixing equipment, and is easily connected to the suction interface of fracturing truck and the discharge interface of sand mixing truck. Low pressure manifold and high pressure manifold are fixed on the same skid, they do not interfere with each other, and convenient for connecting. The low pressure manifold provides an extremely large volume of flow and is suitable for high-flow, rapid fracturing operations.



#### **Description**

The high-pressure shunt manifold is mainly used for multi-wellhead fracturing. It is composed of fracturing sand service valve, fracturing eight-way cross (or single-channel fracturing five-way), connecting pipe, four-way cross, skid and other components, and finally achieves multi-wellhead chain fracturing operation. The single-channel shunt manifold adopts single-channel structure design, and the large-displacement connection and the single-channel universal manifold act directly on the operating wellhead, which is controlled by the fracturing valve switch to realize the on-off of the operating wellhead



(High-pressure shunt manifold)

#### **Product Parameters**

• Working Pressure: 15000PSI TO 20000PSI

• Main Bore ID: 4-1/16" \ 5-1/8" \ 7-1/16" Side Outlet: 3-1/16"

Working Temperature: K,L,P,R,S,T,U,V (-60° - 121°)

• Material Class: AA - HH

• Product Specification Level: PSL1-PSL3

• Performance Requirement: PR1

• Applicable Working Condition: Fracturing fluid

Applicable Standard: API 6A 21ST





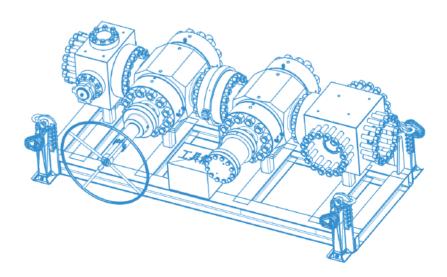
Fracturing project in Sichuan

#### **Product Reliability**

- 1 All parts of the high pressure shunt manifold are made of high strength and high quality alloy steel with high forging ratio.
- 2 All metal seal ring grooves in the high pressure shunt manifold are surface welded with corrosion resistant alloys, and all parts subject to high scour frequency are surface welded with scour resistant hard alloys.
- 3 In the high-pressure shunt manifold, the valve adopts sand service structure fracturing valve, and the important parts are surfacing nickel-based alloy 625.
- 4 All bolts and nuts in high pressure shunt manifolds with flange connections shall be coated with high quality thread fastening glue.
- 5 Height adjusting support legs can meet the needs of different terrain.
- 6 Frac manifolds can be customized to meet field requirements.

#### **Design Features**

- Large diameter design, stable flow rate, suitable for large displacement, fast fracturing operations.
- Adopting integral skid structure, integrated design, strong seismic resistance, compact structure and convenient connection
- Layout form: modular design, according to the actual layout of the site, arrangement scheme can be changed at any time
- The fracturing valve adopts full-diameter, bidirectional seal design, and the seal adopts energy storage spring seal ring to enhance the service life of the product. Ball screw structure design reduces the operating torque.



# High Pressure Universal

#### **Description**

The high-pressure universal manifold, also known as the E-shaped frac manifold, connects the ZIPPER module that receives hydraulic fracturing fluid (frac fluid) to the hydraulic fracturing tree (frac tree) for fracturing the well. Frac trees and ZIPPER modules are typically located in oil and gas fields, straddle uneven terrain and are of varying heights, allowing modules to be connected that are traditionally difficult to connect.



(High pressure universal manifold)

#### **Product Parameters**

- Working Pressure: 15000PSI TO 20000PSI
- Main Bore ID: 4-1/16", 5-1/8", 7-1/16"
- Side Outlet: 3-1/16"
- Working Pressure: K,L,P,R,S,T,U,V (-60℃ 121℃)
- Material Class: AA HH
- Product Specification Level: PSL1-PSL3
- Performance Requirement: PR1
- Applicable Working Condition: Fracturing fluid
- Applicable Standard: API 6A 21ST





Fracturing project in Sichuan

#### **Description**

A frac tree is a wellhead frac pathway that uses a combination of multiple valves to meet the requirements of different stages of field operations, usually consisting of two manual gate valves and one hydraulic gate valve.

#### **Product Parameters**

- Working Pressure: 10000PSI TO 20000PSI
- Main Bore ID: 5-1/8"~7-1/16"
- Side Outlet: 3-1/16"
- Working Pressure: K,L,P,R,S,T,U,V  $(-60\,^{\circ}\text{C} 121\,^{\circ}\text{C})$
- Material Class: AA HH
- Product Specification Level: PSL1-PSL3 Performance
- Requirement: PR1
- Applicable Working Condition: Fracturing fluid
- Applicable Standard: API 6A 21ST



#### **Design Features**

- All metal ring grooves are surfacing nickel-based alloy 625
- 2 Eight-way fracturing cross combination or universal connection combination can be selected according to the demand
- 3 All valve connections are bolted to meet API20E requirements; Pressure reinforced gasket ring seal, creat reliable sealing performance
- 4 GBFL round cavity sand control valve structure, relying on the metal valve plate and metal seat between the plane of the free fit with sealing grease and under the action of the medium to achieve reliable sealing

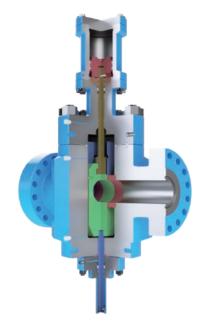
**GBFL Fracture Valve** 

#### **Description**

GBFL SERIES sand service valve is designed by Neway for mud, sand, cement and other mixtures and fracturing and acidification working environment, with reliable down stream sealing performance.

#### **Product Parameters**

- Bore ID: 4-1/16", 5-1/8", 7-1/16"
- Working Pressure: 10000PSI TO 20000PSI
- Material Class: AA HH
- Product Specification Level: PSL1 PSL4
- Working Temperature: L,P,R,S,T,U,V (-46℃~121℃)
- Performance Requirement: PR1 PR2F
- Applicable Working Condition: Oil, natural gas, mud, H2S, CO2 gas



(GBFL Fracture valve)

#### **Design Features**

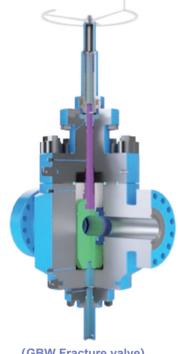
- 1 The product is a single seat full bore design that can withstand line pressure at all times in the valve chamber
- [2] The valve body bonnet connection is sealed by bolts and pressure reinforced gasket ring, and the sealing performance is reliable
- 3 The stem is made of special steel with excellent resistance to H2S corrosion and special surface treatment technology to ensure wear resistance and erosion resistance
- 4 Nickel-based alloy 625 can be surfacing for the valve cavity, valve bonnet stem packing area and metal sealing ring groove according to the actual demand
- 5 Valve gate and seat surface are with spray or overlay hard facing, it has good wear and corrosion resistance
- 6 The valve adopts unique sand service gate design and imported Lip-seal seal ring, effective sand service treatment, effectively reduce the fracturing sand into the valve chamber

#### **Description**

GBW series sand service valve is a special double seat structure valve designed by Neway for mud, sand, cement and other mixtures and fracturing, acidification working environment, with reliable valve sealing performance (patent number: ZL2016 1 0497723.6).

#### **Product Parameters**

- Bore ID: 4-1/16", 5-1/8", 7-1/16"
- Working Pressure: 10000PSI TO 20000PSI
- Material Class: AA FF
- Product Specification Level: PSL1 PSL3G
- Working Temperature: P,R,S,T,U,V (-29℃ 121℃)
- Performance Requirement: PR1
- Applicable Working Condition: Oil, natural gas, mud, H2S, CO2 gas



(GBW Fracture valve)

## **Design Features**

- 1 The product is a round chamber double seat full bore design that can withstand line pressure at all times in the valve chamber
- 2 The valve body bonnet connection is sealed by bolts and pressure reinforced gasket ring, and the sealing performance is reliable
- 3 The stem is made of special steel with excellent resistance to H2S corrosion and special surface treatment technology to ensure wear resistance and erosion resistance
- 4 Nickel-based alloy 625 can be surfacing for the valve cavity, valve bonnet stem packing area and metal sealing ring groove according to the actual demand
- 5 Valve gate and seat surface are with spray or overlay hard facing, it has good wear and corrosion resistance
- 6 Valve with front seal sealing to reduce sand into the body chamber

Swing Check Valve

Debris Catcher

#### **Description**

Swing check valve is mainly used for medium one-way flow on the pipeline, and can only be installed horizon-tally. The large-diameter swing check valve is installed between the high and low pressure manifold and the surface shunt to prevent the fracturing fluid from returning to the high and low pressure manifold from the wellhead and the surface shunt, and impact the fracturing truck and other equipment, thus playing a preventive and protective role.

#### **Product Parameters**

• Working Pressure: 15000PSI TO 20000PSI

• Bore ID: 4-1/16"、5-1/8"、7-1/16"

• Working Temperature: K,L,P,R,S,T,U,V (-60°C - 121°C)

• Material Class: AA - HH

• Product Specification Level: PSL1 - PSL3

• Performance Requirement: PR1

• Applicable Working Condition: Oil, natural gas, mud, H2S, CO2 gas



(Swing check valve)

## **Design Features**

- All pressure containing parts adopt integral forging and machining with high forging ratio
- 2 Partially/fully opened, sealing performance up to ISO 5208 A grade
- 3 The valve body bonnet connection is sealed by bolts and pressure reinforced gasket ring, and the sealing performance is reliable
- 4 Seat and disc seal faces are surfaced with stellite for 300 hours of full pressure fracturing without maintenance.



Swing check valve



Fracturing Project in Sichuan

#### **Description**

The debris catcher is the main equipment in the gas test process, which can capture the large particles of bridge plug and drill cuttings coming back from the bottom of the well.

#### **Product Parameters**

- Working Pressure: 5000PSI TO 20000PSI
- Bore ID: 2-1/16" \ 2-9/16" \ 3-1/16" \ 4-1/16"
- Side Outlet: 2-1/16" \ 2-9/16" \ 3-1/16" \ 4-1/16"
- Working Temperature: K,L,P,R,S,T,U,V (-60°C 121°C)
- · Material Class: AA HH
- Product Specification Level: PSL1 PSL3G
- Performance Requirement: PR1
- Applicable working conditions: fracturing fluid, flowback fluid
- Applicable Standard: API 6A 21ST
- Filter screen size: 3mm, 4mm, 5mm, 6mm, 8mm
- Volume of a single screen: 6L-22L



(Debris catcher)

#### **Design Features**

- Double filter screens, can be changed at any time to clean or replace the filter
- 2 Quick union connection, avoiding cumbersome disassembly and replacement
- 3 With instant discharge pressure relief device, beware of suppressing pressure when removing the filter screen

Cyclone Desander

Double Barrel Desander

#### **Description**

The centrifugal force generated by the rotating air flow is used to separate the sand from the air flow. After the fluid enters the cylinder tangentially, the swirling flow occurs according to the trajectory specified by the cyclone element inside the cylinder, resulting in centrifugal force and gravity. The sand will settle in the sand storage cylinder below the swirling cylinder, and finally the sand is discharged through the sand discharge port of the sand storage cylinder.

# **Product Parameters**

• Working Pressure: 5000PSI TO 20000PSI

• Bore ID: 2-1/16"、2-9/16"、3-1/16"、4-1/16"

• Side Outlet: 2-1/16"、2-9/16"、3-1/16"、 4-1/16"

Working Temperature: K,L,P,R,S,T,U,V (-60°C - 121°C)

Material Class: AA - HH

• Product Specification Level: PSL1 - PSL3G

• Performance Requirement: PR1

Applicable working conditions: Downhole flowback mixture

Applicable Standard: API 6A 21ST

# Not to Express!

(Cyclone desander)

# **Design Features**

- 1 The inner wall of the built-in cyclone element is surfaced with scouring resistant hard alloy to ensure reliable work with independent sand storage cylinder, which can meet the requirements of continuous online sand discharge
- 2 The side end of the sand storage cylinder is equipped with a forced sand removal interface, which can be used to design customized modules for forced sand removal under extreme working conditions, with a high degree of standardization
- 3 Large capacity sand storage cylinder, the volume is not less than 200L
- 4 GBW type professional sand service valve can be selected, with excellent sand control performance can be selected remote control and power nozzle
- 5 Professional lifting device is optional to match the height of bypass pipeline

#### **Description**

The fluid enters the desander cartridge from the top, and the sand stays inside the cartridge through the filter screen, sinks into the bottom of the cartridge, and then is discharged through the sand discharge port. The fluid flows through the gap in the filter screen and enters the downstream from the middle of the desander.

#### **Product Parameters**

• Working Pressure: 5000PSI TO 20000PSI

• Bore ID: 2-1/16" - 4-1/16"

• Side Outlet: 2-1/16" - 4-1/16"

• Working Temperature: K,L,P,R,S,T,U,V (-60℃ - 121℃)

• Material Class: AA - HH

• Product Specification Level: PSL1-PSL3

• Performance Requirement: PR1

Applicable Working Condition: Fracturing fluid, flowback fluid

Applicable Standard: API 6A 21ST

• Filter Screens Size: 50 μm, 100 μm, 200 μm, 400 μm, 800 μm

Volume of a single screen: ≥40L

• Natural gas processing capacity: ≥ 1.5 million square meters/day



(Double barrel desander)

#### **Design Features**

- Mechanical and electronic differential pressure technology, through data acquisition monitoring filter pressure difference, continuous recording of pressure difference can be removed by the solid particle size depends on the filter aperture
- Easy to install and transport, suitable for short-term installation, well washing and test sand discharge: up filter screen, double stage throttling online sand discharge
- 3 The maximum liquid flow is 800m3/d and the volume of each sand barrel is 40L/48L

NOE is dedicated to the pursuit of providing Zero Defect products for our customers. Employ a Six Sigma quality management system and advanced statistical data analysis to continually enhance and improve our precesses and control our overall product quality. NOE's industrial certifications include ISO 9001, ISO14000, ISO45001, API6A, API16C, API 17D, API Q1, TS2710N10-2013, CE-PED qualification and hold PR2 certification issued by CA's like DNV, ABS & Lloyds.



#### **API Series Certificate**



#### **ISO Series Certificate**



Other certificates

# 2021

NOE Vietnam successfully obtained API 6A certificate; NOE subsea valve has completed type approval test and obtained Baker Hughes approval;

2012

Neway Italy was officially established

NOE successfully delivered the first high-pressure Choke and Kill manifold with skid to Saudi Arabia

20

# 2019

NOE independently developed Self-contained SSV and delivered to the end user, NOE Vietnam company was established

# 2018

Neway Fluid Control (Suzhou) Co., Ltd. was established

2014

Neway was successfully listed on the Shanghai Stock Exchange

NOE obtained API 16C certificate and began to produce complete equipment of choke and kill manifold

# 2009

2015

NOE has obtained API 17D/API 6DSS certificate

NOE obtained the first API 6A PR2F certificate

2007 NOE was officially established

2013

NOE passed the review of Schlumberger, and delivered complete sets of well testing manifold;

Neway Dubai and Neway Singapore were established

# 2005

NOE has obtained API 6A certificate, Start production of wellhead equipment, and high-pressure valves; Neway Saudi factory established

# 2004

Neway Industrial Materials was officially established; Newey was approved by Shell

# 2011

Neway acquired DongWu machinery;Neway Netherlands was officially established

Neway Suzhou was officially established

Neway Valve was officially established













## **NEWAY OVERSEAS SUBSIDIARIES**

#### **NOE China**

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#### **NOE** America

Address: 9757 Stafford Centre Drive, Stafford TX Postcode: 77477

#### **NOE Vietnam**

Address : Lot 12, N11 street, Dat Do I industrial Park, Phuoc Long Tho Tel: 84-38-6220454 E-mail: noe@neway.com.cn Postcode:790000

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Address :100C Pasir PanjangRoad, #08-21/22,Interlocal Centre,Singapore Tel : +65 6684 7968 Fax : +65 6684 7970

#### **NOE Dubai**

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Seller will replace without charge or refund the purchase price of products provided by Seller which prove to be defective in material or workmanship, provided in each case that the product is properly installed and is used in the service for which Seller recom-mends it and that written claim, specifying the alleged defect, is presented to the Seller within 18 months from the date of shipment or 12 months after installation, whichever occurs first. Seller shall in no event bear any labor, equipment, engineering or other costs incurred in connection with repair of replacement. The warranty stated in this paragraph is in lieu of all other warranties, either expressed or implied. With respect to warranties, this paragraph states Buyer's exclusive remedy and seller's exclusive liability.

# **After-sales Service**

Synchronous On-site dispatch for large-scale project Maintenance CNAS laboratory failure Analysis **Experts-Always** 24/7/365 Hotline At Your Side 40+ Domestic & Overseas Service Experts

700,000 MRO parts in Inventory

50,000 MRO finished

products in Inventory

On site within 24h

Service progress monitored through CRM system

Service network in 80+Countries