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

GB/T 26136-2018

Replacing GB/T 26136-2010

Ultra-high pressure waterjet cutting machines

超高压水切割机

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 26136-2010 "Ultra High Pressure Water Cutting Machine". Compared with GB/T 26136-2010, except for editorial changes The main technical changes are as follows:

- The scope of the standard is modified to a post-mixing ultra-high pressure water cutting machine, the parameter range is modified to 250MPa~400MPa (see Chapter 1, Chapter 1 of the.2010 edition);
- The basic parameter table has been deleted according to the scope (see 3.2.1, 3.2.1 of the.2010 edition);
- Increased the performance of the "main machine operating under rated pressure and rated flow conditions, the pressure fluctuation of the output ultra-high pressure water should be $\leq 5\%$ " Seeking (see 4.2.1.4);
- Increased inspection requirements for "cutting platforms" (see 4.2.2);
- Added inspection requirements for "four-axis linkage cutting heads" (see 4.2.3);
- Increased the inspection requirements for the "five-axis linkage cutting head" (see 4.2.4);
- Increased the accumulative running time requirements of "accumulators, high pressure cylinders" (see Table 4). This standard was proposed by the China Machinery Industry Federation. This standard is under the jurisdiction of the National Jet Equipment Standardization Technical Committee (SAC/TC493). This standard was drafted. Nanjing Dadi Waterjet Co., Ltd., Hefei General Machinery Research Institute, Guangzhou Huasheng Machinery Equipment Co., Ltd. Shenyang Alto Fu Technology Co., Ltd., Shanghai Lion Mai Technology Co., Ltd. The main drafters of this standard. Xue Shengxiong, Chen Bo, Wu Ziquan, Li Yuefeng, Chen Zhengwen, Zhao Hongjun, Zhang Shijin, Jiang Zhenhan. The

previous versions of the standards replaced by this standard are.

---GB/T 26136-2010. Ultra high pressure water cutting machine

1 Scope

China's national standard for ultra-high pressure waterjet cutting machines. It specifies the classification, the requirements, the test methods, the inspection rules and the marking, packaging, transport and storage of machines that cut material with a water jet at ultra-high pressure. Waterjet cutting is the only process that cuts almost anything without heat. The jet leaves the orifice at several times the speed of sound, and with abrasive garnet entrained into it, it erodes its way through steel, titanium, stone, glass, composite and laminate alike - leaving no heat-affected zone, no thermal distortion, no hardened edge and no change to the material either side of the cut. For titanium and for aluminium alloys that lose their temper when heated, for carbon fibre laminates that delaminate, for glass and stone that crack, and for anything that must not be annealed at its edge, that is not a convenience but the reason the process is chosen over laser or plasma. The engineering problem is the pressure. Modern machines run at four to six thousand bar, which is beyond ordinary hydraulic practice: the water is compressible at those pressures, the intensifier pump cycles the high pressure components through a full pressure reversal several times a second, and the tubing, fittings and seals live in fatigue with a failure mode that is a jet of water capable of severing a limb. So the standard specifies the pressure system and its components, the fatigue rating and the safe life, the cutting head and orifice, the abrasive delivery, the motion system and its accuracy, and the cutting performance in terms of the thickness and the edge quality achieved on stated materials - together with the guarding, the catcher tank and the interlocks that keep the jet contained. Issued on 28 December 2018 and in force since 1 July 2019, it replaces GB/T 26136-2010.

This standard specifies the type, basic parameter model, technical requirements, test methods, signs, packaging and storage of the post-mixing ultra-high pressure water cutting machine. Deposit and transport. This standard is applicable to ultra-high pressure water cutting machine with rated output pressure of 250MPa~400MPa (referred to as "water cutting machine" for short, its main machine is Ultra high pressure supercharger or ultra high pressure pump).

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 3 common thread finish, shoulder distance, undercut and chamfer

GB/T 191 packaging storage and transportation icon

GB/T 196 basic thread basic size

GB/T 197 ordinary thread tolerance

GB/T 699 high quality carbon structural steel

GB/T 700 carbon structural steel

GB/T 1220 stainless steel rod

GB/T 3077 alloy structural steel

GB 5226.1 Mechanical electrical safety machinery and electrical equipment - Part 1.
General technical conditions

GB 5749 Sanitary Standard for Drinking Water GB/T 13306 signage

GB/T 14976 stainless steel seamless pipe for fluid transportation

GB/T 17421.1 General rules for machine tool inspection - Part 1. Geometrical accuracy of machine tools under no load or finishing conditions 3 type, basic parameters and models

3.1 type The water cutting machine is composed of an ultra-high pressure generating device (main unit), a cutting platform, a cutting actuator and a control system. Main unit of water cutting machine Hydraulically driven supercharger and ultra high pressure pump, the prime mover is electric motor or diesel engine.

3.2 Basic parameters and models

3.2.1 Basic parameters The basic parameters of the water cutting machine host should be as specified in Table 1.