



ZG40CrMnMoNiSiRe

ZG40Cr8MnMoNiSiRe is the latest rare earth alloy wear-resistant material developed by our factory on the basis of the original rare earth alloy. By increasing the content of Cr in the rare earth alloy, the wear resistance of the rare earth alloy is greatly increased.

ZG40Cr8MnMoNiSiRe now is instead of ZG40CrMnMoNiSiRe to produce rare earth metal wear resistant pipe and fittings.

Raw pipes process



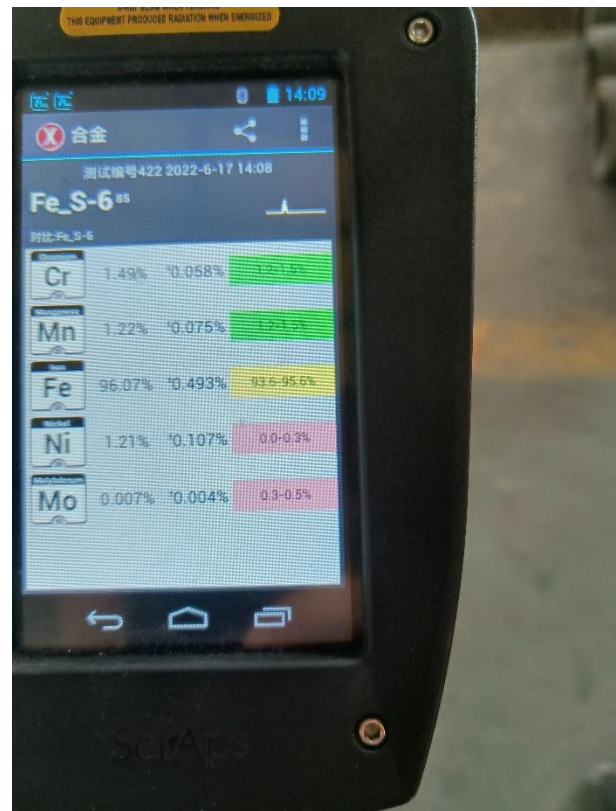
Rare earth alloy wear-resistant pipes are produced by horizontal centrifugal casting, in which the smelted liquid metal is passed through the pouring riser and diverted into the rotating mold barrel (the speed of the mold barrel is generally 800-1000 rpm), under the action of centrifugal force A casting method for filling and solidifying into a casting. The horizontal centrifugal casting machine is used for casting various tubular castings and various carbon steel, alloy steel pipes and double-layer steel rolls that require different compositions of the inner and outer layers.







PMI test:



Rare earth alloy wear-resistant pipe material composition table

| No. | Grade | C | Mn | Si | Cr | Ni | Mo | W | V | Nb | Cu | Re | S | P |
|-----|---------------------|-----------|----------|----------|-----------|----------|----------|---|---|----|----------|----|--------|--------|
| 1 | ZGCr20Mo3Ni3Re | 2.50/3 | 1.50/2 | 0.80/1.2 | 18.0/23 | 2.50/3 | √ | | | | 1.20/1.5 | √ | ≤0.06 | ≤0.06 |
| 2 | ZGCr28Mo3Ni3Re | 2.80/3.3 | 1.50/2 | 1.80/1.2 | 25.0/30.0 | 2.80/3.3 | √ | | | | 1.80/2.3 | √ | ≤0.06 | ≤0.06 |
| 3 | ZGCr15Mo3Re | 2.60/3.2 | 1.20/1.6 | 1.0/1.5 | 12.0/16 | √ | 2.50/3 | | | | 1080/1.2 | √ | ≤0.04 | ≤0.05 |
| 4 | ZGCr25Ni4Si2Re | 0.35/0.45 | 0.80/1.2 | 1.20/1.6 | 23.0/26 | 3.50/4.5 | | | √ | | | √ | ≤0.035 | ≤0.045 |
| 5 | ZGCr15Mo2Re | 1.80/2.2 | 0.80/1.2 | 1.0/1.5 | 14.0/18 | √ | 2.0/2.5 | | | | 0.80/1.2 | √ | ≤0.04 | ≤0.05 |
| 6 | ZG40CrMnMoNiSiRe | 0.40/0.5 | 1.20/1.6 | 1.50/2 | 1.10/1.6 | 1.0/1.5 | √ | | √ | | √ | √ | ≤0.035 | ≤0.04 |
| 7 | ZG40Cr5Ni3MoVWR | 0.35/0.45 | 0.80/1.2 | 1.20/1.6 | 23.0/26 | 2.50/3.5 | √ | √ | √ | | | √ | ≤0.045 | ≤0.055 |
| 8 | ZG50Cr18Ni4MoVWCuRe | 0.45/0.6 | 1.0/1.4 | 1.50/2 | 16.0/20 | 3.50/5 | √ | √ | √ | | 0.40/0.6 | √ | ≤0.35 | ≤0.35 |
| 9 | ZGCr25Ni2Mo2WVCuRe | 0.40/0.6 | 0.80/1.2 | 1.20/1.6 | 23.0/v | 1.50/2.5 | √ | √ | √ | | 0.20/0.4 | √ | ≤0.035 | ≤0.035 |
| 10 | ZG40Cr25Ni6MoVWCuRe | 0.35/0.45 | 1.2/1.6 | 1.50/2 | 23.0/26 | 5.0/7 | √ | √ | √ | √ | √ | √ | ≤0.35 | ≤0.045 |
| 11 | ZG90CrMn13MoSiVRe | 0.40/1.3 | 11.0/14 | 0.30/0.8 | √ | | √ | | | | | | ≤0.04 | ≤0.04 |
| 12 | ZGCrMu10MoSiVRe | 1.0/1.2 | 8.0/11 | 0.30/0.8 | √ | | √ | | | | | | ≤0.04 | ≤0.04 |
| 13 | ZGW5Cr4Re | 2.50/3.5 | 1.5/1 | 0.50/1 | 35.0/4.5 | √ | | | | | | √ | ≤0.10 | ≤0.15 |
| 14 | ZGCr25MoRe | 2.30/3 | 0.50/0.9 | 0.30/0.6 | 23.0/28 | √ | | | | | | √ | ≤0.06 | ≤0.10 |
| 15 | ZGCr15MoRe | 3.0/3.5 | ≤1.0 | 0.15/1 | 15.0/18.6 | | 2.80/3.3 | | | | | √ | ≤0.06 | ≤0.10 |
| 16 | ZG30CrMnSi | 0.27/0.33 | 1.30/1.5 | 1.20/1.5 | √ | | √ | | | | | √ | ≤0.03 | ≤0.04 |
| 17 | ZG40CrNiRe | 0.28/0.43 | 1.10/1.4 | 0.80/1 | √ | | √ | | | | | √ | ≤0.06 | ≤0.10 |
| 18 | ZG33Cr13Ni4Re | 0.30/0.35 | ≤0.80 | ≤0.60 | 12.0/14 | 4.0/4.5 | √ | | | | | √ | ≤0.06 | ≤0.10 |
| 19 | ZG40CrSiN | 0.35/0.45 | 1.0/1.5 | 1.50/2 | √ | | √ | | | | | | ≤0.04 | ≤0.08 |



Hydraulic test

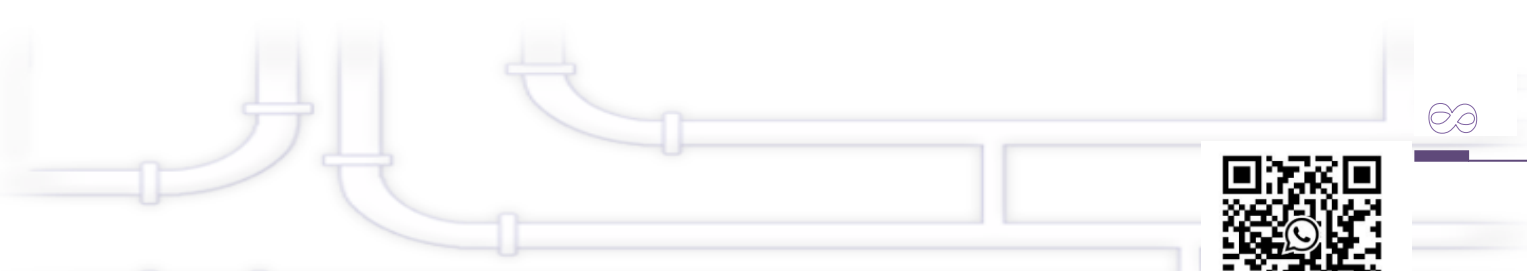


The hydraulic test is an indispensable procedure before the completion of the water supply or drainage project. It refers to the hydraulic pressure applied by the pressurized pump in the pipeline to the design pressure, and then to check whether there is leakage, etc., to ensure the construction quality.



Flange size inspection





Wall thickness measurement



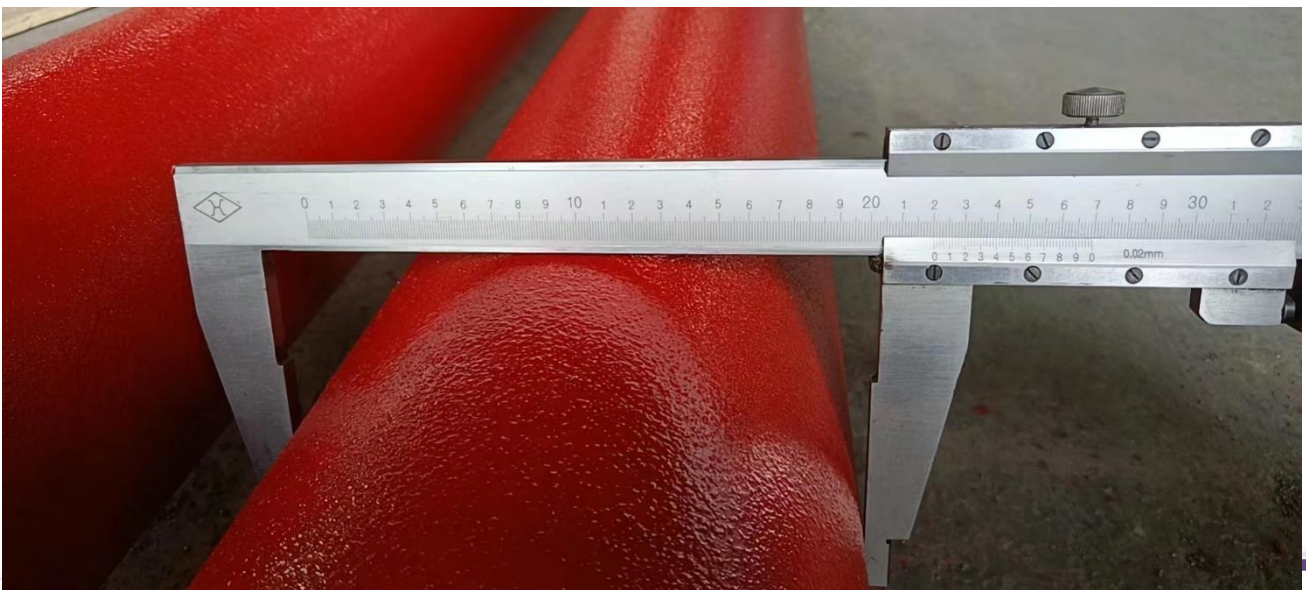
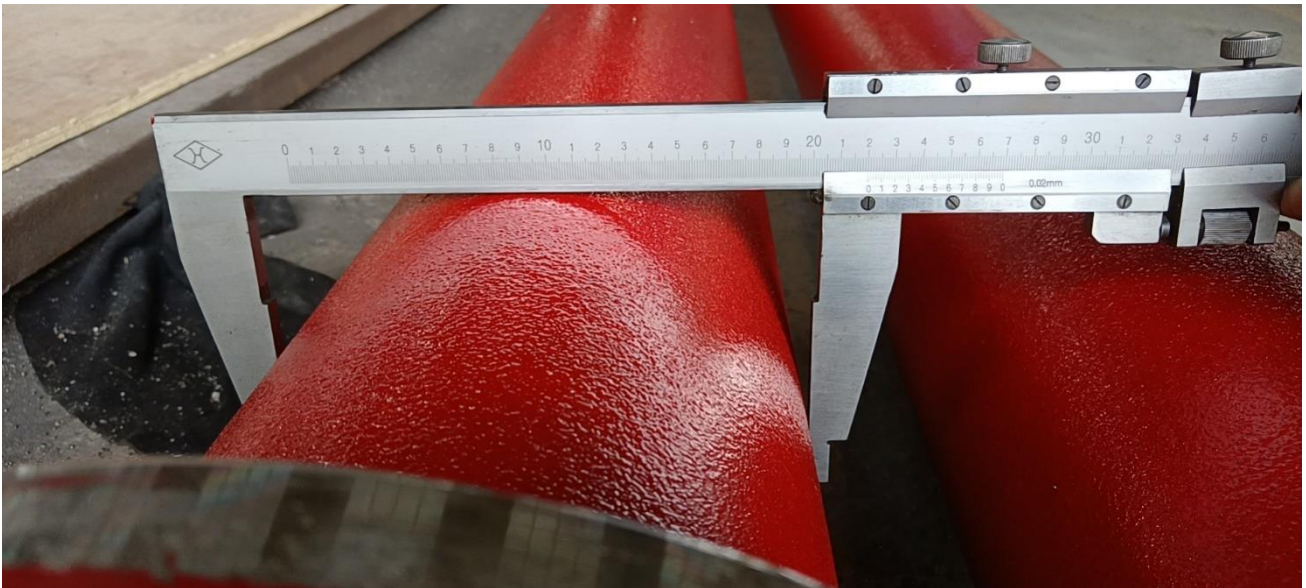
Welding flange





Final inspection









Rare earth alloy wear-resistant cast pipe is suitable for any pressure level. It is used in close cooperation with the outer lining, and a special process is used to form a connection between the composite layer solutions to ensure the reliability of operation. Rare earth alloy wear-resistant high chromium cast iron pipe has good mechanical shock resistance, thermal shock resistance, installation connection Convenient, can be arbitrarily cut and welded.

Compared with the high manganese steel material under the same conditions, the unit wear of rare earth alloy wear-resistant elbow is about 1/3 of the high manganese steel, and the service life is more than 3 times that of the high manganese steel. The elbow and the branch pipe are used together with the seamless pipe section to manufacture suitable irregular pipes, which are convenient for cutting and welding maintenance.

- Material: ZG40CrNiMoMnSiRe
- Hardness: HRC \geq 40
- Impact toughness: \geq 14J/cm²
- Tensile strength: \geq 700MPa

With wear resistance and heat resistance, the wear resistance is 10 times that of ordinary steel pipes, and the temperature resistance range can reach \leq 400° C. It can be cut and welded at will, and is very convenient for construction and installation.



poor wear resistance



prone to cracks



low pressure resistance

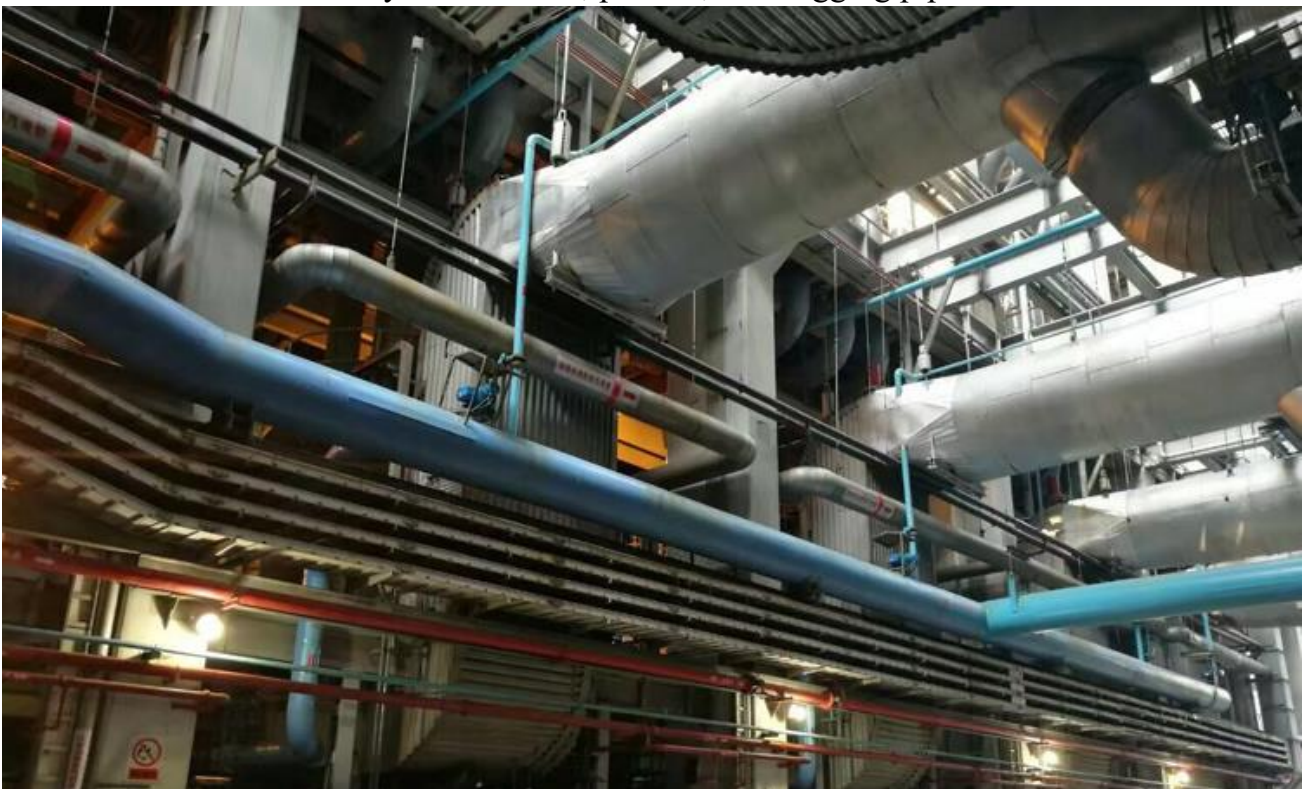


poor sealing





Rare high-strength low-alloy heat-resistant, wear-resistant steel parts for the power plant boiler systems in coal, powder, ash slugging pipeline.



More types of rare earth alloy products



Rare earth alloy wear-resistant straight pipe



Rare earth alloy wear-resistant elbow



Rare earth wear-resistant alloy tee



Rare Earth Alloy Coal Mill Spiral Tube



Rare earth alloy red liner



Rare earth alloy wear-resistant pulverized coal mixer



List of Core values

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SUNNY STEEL ENTERPRISE LTD.

Phone:+86 21 3378 0199

Fax:+86 21 5107 9722

E-mail:sales@sunnysteel.com

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