

DESCRIPTION

Basic coated electrode for creep resisting steels and cast steels up to 580°C

1¼Cr-1Mo-¼V electrodes used for welding high temperature steels of similar composition. These alloys provide good creep rupture properties up to about 580°C. Widely used in valve casings and steam turbines, boilers, pressure vessels and in the power generation and petrochemical industries. Its basic coating ensures excellent positional welding characteristics with good gap bridging ability. Ease of slag removal reduces postwelding cleaning operations to a minimum.

SPECIFICATIONS						
ISO 3580-A		E CrMoV1 B 32	2 AWS A5.5			E9018-G
DIN			Werkstoff	Number		-
Certifications			- Shielding			-
Positions		PA, PB, PC, PD, PE, PF	- Current			DC+, AC
ASME QUALIFICATIONS		FERRITE	PREN		HARDNESS	
F-No (QW432)	4	-	-		-	
A-No (QW442)	-					
CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES			MIN	VARIANT
С	0.08	Tensile strength R _m MPa			620	780
Mn	0.85	Yield strength R _{p0.2} MPa			530	730
Cr	1.2	Elongation A ($L_0=5d_0$) %			17	18
V	0.2	Impact Charpy ISO-V			-	60J @ 20°C
Р	0.01	Impact Charpy ISO-V			-	-
5	0.01	WELDING PARAMETERS	2.5 mm	3.2 mm	4 m m	
Mo	1.1	Ampere	65A - 90A	90A - 130A	140A - 180A	190A -
Si	0.3	Voltage	-	-		
		Packaging	45 pcs/kg	21 pcs/kg	14 pcs/kg	10 p
		Packaging Tupe	Carton box	Carton hox	Carton hox	Carto



The information in this datasheet is the result of detailed research and is considered accurate as of the publication date. However, we cannot guarantee its complete accuracy, and it is subject to change without notice. Actual results may vary due to many factors like welding procedures, material composition, temperature conditions, bevel configuration, and specific manufacturing techniques. We accept no liability for any errors or omissions in this datasheet. For the most current information, please visit www.daikowelding.com.





APPLICATION

CrMoV base materials exhibit noteworthy creep rupture properties up to approximately 580°C, coupled with a reasonable level of corrosion resistance in superheated steam environments. These materials find common applications in various sectors, including valve casings and steam turbines, as well as general use in boilers and pressure vessels within the power generation and petrochemical industries. The presence of vanadium in these materials enhances the tempering stability of quenched steel, introducing a secondary hardening effect. Additionally, vanadium contributes to grain refinement, increases strength, improves the yield ratio, enhances low-temperature toughness after normalizing, and betters the welding performance of standard low-alloy steel. Adherence to specifications for preheating and post-weld heat treatment is crucial, aligning with the requirements of the base materials.

ALLOY TYPE

1¼%Cr-½%Mo alloyed steel consumables for elevated temperature service with addition of vanadium.

MICROSTRUCTURE

After PWHT, the microstructure consists of tempered bainite.

MATERIALS

EN W.Nr.: G17CrMoV5-10 (1.7706), 21 CrMoV 5 11 (1.8070), 15 CrMoV 5 10 (1.7745), GS-17CrMo 5 11 (1.7706) (cast). **ASTM**: A389 gr. C24 (cast), A356 gr. 9 (cast).



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