G-TECH 310H

SMAW

SUPERAUSTENITIC STEELS
310H

DESCRIPTION

High C basic coated 310 electrode

Basic electrode developed for welding or repairing high alloy heat and corrosion resistant castings of the same general composition. It can be used to weld HK40 base material for centrifugally cast tubes operating at approx. 1000° C . Applications include components for petrochemical and chemical plants and components for cement, ceramic and steel industries. Ease of slag removal reduces post-welding cleaning operations to a minimum.

SPECIFICATIONS

EN ISO 3581-A	E 25 20 H B	**AWS A5.4**	E310H-15
Shielding	-	**Positions**	PA, PB, PC, PD, PE, PF
Current	DC+;	**Packaging Type**	Carton box

ASME QUALIFICATIONS

F-No (QW432)	5
A-No (QW442)	-

PREN

26.33

CHEM. COMP. %	DEFAULT
C	0.4
Mn	1.7
Ni	21
Cr	26
P	0.02
S	0.01
Mo	0.1
Si	0.5
Cu	0.05

MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
Tensile strength R_m MPa	550	760
Yield strength $R_{p0.2}$ MPa	350	550
Elongation A (L_0=5d_0) %	20	18
Impact Charpy ISO-V	-	-
Impact Charpy ISO-V	-	-

WELDING PARAMETERS	2.5 mm	3.2 mm	4.0 mm	5.0 mm
Ampere	50A - 80A	80A - 110A	110A - 150A	150A - 200A
Voltage	-	-	-	-
Packaging	56 pcs/kg	29 pcs/kg	19 pcs/kg	12 pcs/kg
Packaging Type	Carton box	Carton box	Carton box	Carton box

NOTES

Pcs/kg is indicative, actual number may vary ± 5%.

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DAIKO

310H

DESCRIPTION

APPLICATION

G-TECH 310H is specifically designed for the welding of HK40, one of the reference materials for centrifuged tubes operating at temperatures of around 1000°C. These alloys are used in reformer coils and steam cracking in chemical and petrochemical plants. Additionally, they are ideal for components such as billet skids, calcination tubes, furnace ring segments, conveyor rollers, and structural elements in environments like the cement, ceramics, and steel industries. Generally, no preheating operations or post-weld heat treatments (PWHT) are necessary.

ALLOY TYPE

0.4%C-25%Cr-20%Ni (310H) austenitic cast alloy for heat resisting service.

MICROSTRUCTURE

In the as-welded condition the weld metal microstructure consists of austenite with eutectic and secondary carbides.

MATERIALS

EN W.Nr.: 1.4846 (X40CrNi 25 21), 1.4848 (G-X40CrNiSi 25 20)
ASTM: SA351 gr. HK40, A608 gr. HK40
PROPRIETARY: H20 (Doncasters Paralloy), Thermalloy 47 (Duraloy), Lloyds T47 (LBA), HR6 (Cronite)

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