

3CR12 is a weldable chromium containing utility stainless steel, with a fine grained duplex ferritic-martensitic microstructure.

Application

3CR12 is a particularly recommended for use on moderately aggressive environments found in the construction, industrial, marine, mining and mineral processing fields. It provides a cost effective solution to corrosion, oxidation and corrosion/abrasion problems in a wide range of environments. Typical examples include:

- Ore Cars
- Pipe & Tube for Slurry Handling
- Coal Chutes and Liners
- Storage Bins and Hoppers
- Locomotive Bodies
- Ash Handling
- Masonry Fixings
- Coal Wash Plant Structure
- Conveyor Decking
- Sand – Chutes Dredging
- Screw Conveyors

Aplikasi

Pemakaian 3CR12 sangat dianjurkan pada kondisi agresif / keasaman sedang, yang banyak ditemui pada bidang konstruksi, industri, kelautan, pertambangan dan pemrosesan mineral. Penggunaan baja ini merupakan jawaban yang tepat dan ekonomis untuk proses korosi, oksidasi dan korosi/pengikisan dalam berbagai lingkungan seperti:

- Ore Cars
- Pipe & Tube for Slurry Handling
- Coal Chutes and Liners
- Storage Bins and Hoppers
- Locomotive Bodies
- Ash Handling
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ELEVATED TEMPERATURE PROPERTIES

Like other chromium stainless steel, 3CR12 has useful strength at temperature about 600°C. This elevated temperature strength is significantly higher than that of plain carbon steels. Hot working can be carried out at 700°C - 800°C without significantly affecting subsequent mechanical properties. Above 850°C, 3CR12 behaves superplastically due to the finegrained duplex microstructure.

SIFAT PADA SUHU TINGGI

Seperti baja tahan karat khromium lainnya, 3CR12 memiliki kekuatan yang baik pada suhu 600°C, kekuatan pada temperatur tinggi ini jauh lebih baik dibandingkan dengan baja karbon. Pengerjaan panas dapat dilaksanakan pada 700°C - 800°C tanpa mempengaruhi sifat mekanik. Diatas 850°C, 3CR12 memiliki sifat superplastis berkat mikro struktur fine grained duplex.

Sifat Mekanik / Mechanical Properties

Sifat Properties	Tebal Thickness	Spesifikasi Specification
Tegangan Luluh 0,2% 0.2% Proof Stress	< 3mm ≥ 3mm	280 MPa (Min) 300 MPa (Min)
Kuat Tarik Tensile Strength		460 MPa
Regangan 50mm G.L Elongation in 50mm G.L	≤ 4.5mm > 4.5mm	18% (Min) 20% (Min)
Nilai Impak Charpy V 20°C Charpy Impact V 20°C	all	35 J cm ² (Min)
Kekerasan Hardness	< 12mm ≥ 12mm	220 HB 250 HB

Komposisi Kimia / Chemical Composition

C	Si	Mn	P	S	Ni	Cr	Ti	Ni
0.03 Max	0.1 Max	0.15 Max	0.40 Max	0.03 Max	1.5 Max	10.5 - 13.0	0.06 Max	0.03 Max



3CR12 adalah baja tahan karat dan tahan kikis untuk aplikasi pengikisan sedang pada lingkungan korosi.