

Duplex and super-duplex steels

A range of steels that combine high strength with excellent resistance to chloride stress and chloride pitting corrosion. Used in desalination and upstream oil and gas applications.

William Cook Cast Products is approved to NORSOK M650 Ed. 4 for the manufacture of investment castings up to 60mm section thickness and sand castings up to 250mm section thickness in ASTM A995 grades 4A, 5A and 6A.

| US | | UK | | German | | EN | |
|---------------|--------------|----------|--------|-----------|--------|----------|----------------------|
| Spec No. | Grade | Spec No. | Grade | Spec No. | Grade | Spec No. | Grade |
| A995 (J93372) | 1B(CD4MCuN) | BS3100 | 332C13 | DIN 17445 | 1.4517 | EN 10283 | GX2CrNiMoCuN25-6-3-3 |
| A995 (J93345) | 2A(CE8MN) | | | | | | |
| A995 (J93371) | 3A(CD6MN) | BS3100 | 332C15 | | | | |
| A995 (J92205) | 4A(CD3MN) | | | | | EN 10283 | GX2CrNiMoN22-5-3 |
| A995 (J93404) | 5A(CE3MN) | | | DIN 17445 | 1.4468 | EN 10283 | GX2CrNiMoN25-6-3 |
| A995 (J93380) | 6A(CD3MWCuN) | | | DIN 17445 | 1.4469 | EN 10283 | GX2CrNiMoN26-7-4 |

Nickel-based materials

A range of Ni-Cu, Ni-Mo and Ni-Cr superalloys with excellent corrosion and creep resistance, used in applications exposed to extreme pressure and heat.

| US | | UK | | German | | EN | |
|-----------|---------|----------|-------|----------|-------|----------|-------|
| Spec No. | Grade | Spec No. | Grade | Spec No. | Grade | Spec No. | Grade |
| ASTM A494 | CU5MCuC | | | | | | |
| ASTM A494 | CW12MW | | | | | | |
| ASTM A494 | CW2M | | | | | | |
| ASTM A494 | CW6M | | | | | | |
| ASTM A494 | CW6MC | | | | | | |
| ASTM A494 | CX2MW | | | | | | |
| ASTM A494 | CY40 | | | | | | |
| ASTM A494 | CZ100 | | | | | | |
| ASTM A494 | M25S | | | | | | |
| ASTM A494 | M30C | | | | | | |
| ASTM A494 | M30H | | | | | | |
| ASTM A494 | M35-1 | | | | | | |
| ASTM A494 | N12MV | | | | | | |
| ASTM A494 | N7M | | | | | | |

Austenitic and super-austenitic stainless steels

A wide range of corrosion-resistant steels used in architectural, industrial, oil and gas, chemical, marine and many other applications.

| US | | UK | | German | | EN | |
|------------|---------|----------|--------|-----------|--------|----------|--------------------|
| Spec No. | Grade | Spec No. | Grade | Spec No. | Grade | Spec No. | Grade |
| A351 | CF3 | BS3100 | 304C12 | | | EN 10283 | GX2CrNi19-11 |
| A351 | CF8 | BS3100 | 304C15 | DIN 17445 | 1.4308 | EN 10283 | GX5CrNi19-10 |
| A351 | CF3M | BS3100 | 316C12 | | | EN 10283 | GX2CrNiMo19-11-2 |
| A351 | CF8M | BS3100 | 316C16 | DIN 17445 | 1.4408 | EN 10283 | GX5CrNiMo19-11-2 |
| A351 | CF10M | | | | | | |
| A351 | CF8C | BS3100 | 347C17 | DIN 17445 | 1.4581 | EN 10283 | GX5CrNiNb19-11 |
| | | BS3100 | 318C17 | | | EN 10283 | GX5CrNiMoNb19-11-2 |
| | | | | SEW 395 | 1.3952 | | |
| A351 | CG8M | BS3100 | 317C16 | | | | |
| A351 | CH20 | | | | | | |
| A351 | CK20 | | | | | | |
| A351 | CT15C | | | SEW 595 | 1.4859 | | |
| A351 | CK3MCuN | | | | | | |
| UNS J95370 | | | | | | | |
| | | | | | | EN 10283 | GX2NiCrMoCu25-20-5 |
| A743 | CN3M | | | | | | |
| A351 | CN7M | BS3100 | 332C11 | SEW 410 | 1.4529 | | |

Ferritic, martensitic and precipitation hardening steels

A range of Fe-Cr-Ni alloys with varying combinations of corrosion, temperature and wear resistance.

| US | | UK | | German | | EN | |
|---------------------|------------|----------|--------|-----------|--------|----------|-------------|
| Spec No. | Grade | Spec No. | Grade | Spec No. | Grade | Spec No. | Grade |
| ASTM A217/A743 | CA15 | BS3100 | 410C21 | DIN 17445 | 1.4027 | EN 10283 | GX12Cr12 |
| | | BS3100 | 420C24 | DIN 17465 | 1.4729 | | |
| ASTM A743 | CA40/CA40F | BS3146 | ANC1C | | | | |
| | | BS3100 | 452C11 | DIN 27465 | 1.4823 | | |
| | | | | DIN 17245 | 1.4931 | | |
| ASTM A747 | CB7Cu-1 | UNS | 174PH | | | | |
| ASTM A352/A487/A743 | CA6NM 'A' | BS3100 | 425C11 | DIN 17445 | 1.4313 | EN 10283 | GX4CrNi13-4 |
| ASTM A487 | CA6NM 'B' | BS3100 | 425C12 | | | | |

Heat-resistant stainless steels

A range of Fe-Cr-Ni alloys with excellent resistance to high temperature oxidation and creep. Used in high temperature applications such as heat treatment furnace furniture and steel processing plants.

| US | | UK | | German | | EN | |
|----------|-------|----------|--------|-----------|--------|----------|-----------------|
| Spec No. | Grade | Spec No. | Grade | Spec No. | Grade | Spec No. | Grade |
| A297 | HK | BS3100 | 310C40 | SEW 595 | 1.4848 | EN 10295 | GX40NiCrSi25 20 |
| A297 | HI | BS3100 | 310C45 | | | | |
| A297 | HD | BS3100 | 302C35 | DIN 17465 | 1.4823 | | |
| A297 | HP | BS3100 | 331C60 | DIN 17465 | 1.4857 | | |
| A297 | HT | BS3100 | 330C11 | | | | |
| A297 | HU | BS3100 | 331C40 | | | | |
| A297 | HH | BS3100 | 309C30 | | | | |

Low and high alloy steels

Quenched and tempered steels with excellent toughness at low temperatures. Used in high-strength applications including trains, off-highway vehicles, and power generation.

| US | | UK | | German | | EN | |
|-----------|---------|----------|-------|-----------|--------|----------|-------------|
| Spec No. | Grade | Spec No. | Grade | Spec No. | Grade | Spec No. | Grade |
| ASTM A217 | C5 | BS3100 | B5 | | | | |
| ASTM A217 | C12 | BS3100 | B6 | | | | |
| ASTM A217 | C12A | BS3100 | B6 | SEW 595 | 1.7389 | | |
| ASTM A217 | WC1 | BS3100 | B1 | DIN 17245 | 1.5419 | | |
| ASTM A217 | WC6 | BS3100 | B2 | DIN 17245 | 1.7357 | EN 10213 | G17CrMo5-5 |
| ASTM A217 | WC9 | BS3100 | B3 | DIN 17245 | 1.738 | EN 10213 | G17CrMo9-10 |
| | | BS3100 | B4 | | | | |
| ASTM A352 | LC1 | BS3100 | B1 | | | | |
| ASTM A352 | LC2 | | | | | | |
| ASTM A352 | LC3 | BS3100 | BL2 | SEW 685 | 1.5638 | | |
| ASTM A148 | 90-60 | BS3100 | BT1 | | | | |
| ASTM A148 | 105-85 | BS3100 | BT2 | | | | |
| ASTM A148 | 150-135 | BS3100 | BT3 | | | | |
| ASTM A487 | 2B | | | | | | |
| ASTM A487 | 4A | | | | | | |
| ASTM A487 | 4B | | | | | | |
| ASTM A487 | 4C | | | | | | |
| ASTM A487 | 4D | | | | | | |
| ASTM A487 | 10B | | | | | | |
| | | BS3100 | BW2 | | | | |
| | | BS3100 | BW3 | | | | |
| | | BS3100 | BW4 | | | | |

Manganese steel

A work-hardening steel for applications where excellent wear resistance is required such as mining, earthmoving and steel processing.

| US | | UK | | German | | EN | |
|-----------|-------|----------|-------|-----------|--------|----------|-------|
| Spec No. | Grade | Spec No. | Grade | Spec No. | Grade | Spec No. | Grade |
| ASTM A128 | A | BS3100 | BW10 | DIN 17145 | 1.3802 | | |

Carbon manganese steels

General engineering steels with good weldability for use in mechanical and structural applications.

| US | | UK | | German | | EN | |
|-----------|-------|----------|-------|-----------|--------|----------|---------|
| Spec No. | Grade | Spec No. | Grade | Spec No. | Grade | Spec No. | Grade |
| | | BS3100 | AM1 | DIN 1681 | 1.0420 | | |
| ASTM A216 | WCA | BS3100 | AM2 | DIN 1681 | 1.0446 | EN 10213 | GP240GH |
| ASTM A216 | WCB | BS3100 | A1 | DIN 17245 | 1.0619 | | |
| ASTM A216 | WCC | BS3100 | A2 | DIN 1681 | 1.0446 | EN 10293 | GS240 |
| ASTM A148 | 80-40 | BS3100 | A3 | DIN 1681 | 1.0552 | | |
| ASTM A148 | 80-50 | BS3100 | A4 | SEW 510 | 1.6220 | EN 10213 | G20Mn5 |
| ASTM A148 | 90-60 | BS3100 | A5 | | | | |
| | | BS3100 | A6 | | | | |
| | | BS3100 | AW2 | | | | |
| | | BS3100 | AW3 | DIN 1681 | 1.0558 | | |
| ASTM A352 | LCB | BS3100 | AL1 | | | | |
| ASTM A352 | LCC | BS3100 | AL2 | | | | |
| ASTM A352 | LCC | BS3100 | AL3 | | | | |

ACCREDITATIONS AND APPROVALS

- ✓ ISO9001
- ✓ ISO14001
- ✓ ISO45001
- ✓ NORSOK M650 Ed. 4 for ASTM A995 grades 4A, 5A, 6A
- ✓ EU Pressure Equipment Directive 97/23/EC
- ✓ EN10340 for structural steel castings
- ✓ Q1(N) for naval steel castings
- ✓ DEFSTAN 95-25 for armoured steel castings
- ✓ DNV GL offshore standards
- ✓ American Bureau of Shipping
- ✓ Lloyds Register of Shipping

