



# CEWELD AA 90S-B9

|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                         |                      |                    |                         |    |          |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------|--------------------|-------------------------|----|----------|
| TYPE                                               | Metal core wire for heat and creep resistant applications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         |                      |                    |                         |    |          |
| ANWENDUNGEN                                        | Headers, main steam piping and turbine casings, in fossil fuelled power generating plants. Oil refineries and coal liquefaction and gasification plants.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         |                      |                    |                         |    |          |
| EIGENSCHAFTEN                                      | AA 90S-B9 is designed to weld equivalent 'type 91' P91 9CrMo steels modified with small additions of niobium, vanadium and nitrogen to give improved long term creep properties. These consumables are specifically intended for high integrity structural service at elevated temperature so the minor alloy additions responsible for its creep strength are kept above the minimum considered necessary to ensure satisfactory performance. In this case, weldments will be weakest in the softened (intercritical) HAZ region of parent material, as indicated by so-called 'type IV' failure in transverse weld creep tests. |                         |                      |                    |                         |    |          |
| KLASSIFIKATION                                     | AWS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | A 5.28: ~ER 90S-B9      |                      |                    |                         |    |          |
|                                                    | EN ISO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 17634-B: 9C1MV          |                      |                    |                         |    |          |
|                                                    | F-nr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6                       |                      |                    |                         |    |          |
|                                                    | FM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4                       |                      |                    |                         |    |          |
| GEEIGNET FÜR                                       | 1.4903<br>X10CrMoVNb9-1, GX12CrMoVNbN9-1<br>ASTM A 335 Gr. P91, A 336 Gr. F91, A 369 Gr. FP91, A 387 Gr. 91, A 213 Gr. T91, A 182<br>AFNOR NF A-49213/A-49219 Gr TU Z 10, CDVNb 09-01                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |                      |                    |                         |    |          |
| ZULASSUNGEN                                        | CE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                         |                      |                    |                         |    |          |
| SCHWEISSPOSITIONEN                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                         |                      |                    |                         |    |          |
| TYPISCHE CHEMISCHE ANALYSE DES SCHWEISSMETALLS (%) | C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Si                      | Mn                   | Cr                 | Ni                      | Mo | V        |
|                                                    | 0.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.3                     | 1                    | 9                  | 0.3                     | 1  | 0.2      |
| MECHANISCHE GÜTEWERTE                              | Heat Treatment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | R <sub>P0,2</sub> (MPa) | R <sub>m</sub> (MPa) | A <sub>5</sub> (%) | Impact Energy (J) ISO-V |    | Hardness |
|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                         |                      |                    | RT                      |    |          |
|                                                    | 760°C±15°C 2h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 650                     | 780                  | 17                 | 27                      |    | 260 HB   |
| RÜCKTROCKNUNG                                      | Not required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                         |                      |                    |                         |    |          |
| GAS ACC. EN ISO 14175                              | M21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                         |                      |                    |                         |    |          |



# CEWELD AA 90S-B9

AA 90S-B9 1,2MM

| Packaging | KG/unit | EanCode       |
|-----------|---------|---------------|
| BS-300    | 15      | 8720663401984 |