



Multiple Stud Tensioning Machine

PWR-VVER 1200 MW



Siempelkamp

NIS Ingenieurgesellschaft

- Pretensioning force at all 54 RPV studs (M170 x 6 mm) simultaneously
- Due to less space between RPV studs an inner and an outer hydraulic cylinder is united by a drawbar
- Continuous monitoring of pretensioning process
- Max. Force: 8.000 kN - 1.798.561 lbf - 815.743 kp
- Separation of MSTM into 2 halves for easy transport through material hatch
- Homogeneous tensioning of RPV cover
- Elongation recording accuracy (1/100 mm) of all RPV studs simultaneously and monitoring during tensioning process
- Opening or closing of RPV in less than 6 hours, incl. RPV stud turning / 54 RPV studs transportation in the MSTM
- 2 Double stud turning robots, means 4 RPV studs will be turned in or out simultaneously
- RPV stud turning with torque monitoring and weight compensation
- Redundant hydraulic system
- Operating from pool floor level
- Less dose for NPP staff compared to single stud tensioners / less operation time
- Automatic levelling transport cylinders



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