Multiple Stud Tensioning Machine
PWR-VVER 1200 MW
• 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