



P-No. 4 Group No. 1,2- Minm PWHT Temp -1200 Deg F (650 Deg C)

P-No. 5A Group No. 1 and P-No. 5B Group No. 1, Minm PWHT Temp -1,250 Deg F (675 Deg C)

P-No. 15E Group No. 1 -1,350 (730) TO 1445 Deg F (785 Deg C)

Allowable Stress @ 600 Deg C:- as per ASME Sec-II Part -D.

- Gr 11- 17.6 Mpa,
- Gr-22,-23.5 Mpa
- Gr 91-65.0 Mpa

Hence you have problem with Gr 11 steel, upon prolonged exposure @ 585 Deg C. I would think the other way to sustain longer life would be to increase section thickness of Gr 11 steel **in accordance with allowable stress values of Sec-II, Part - D.**