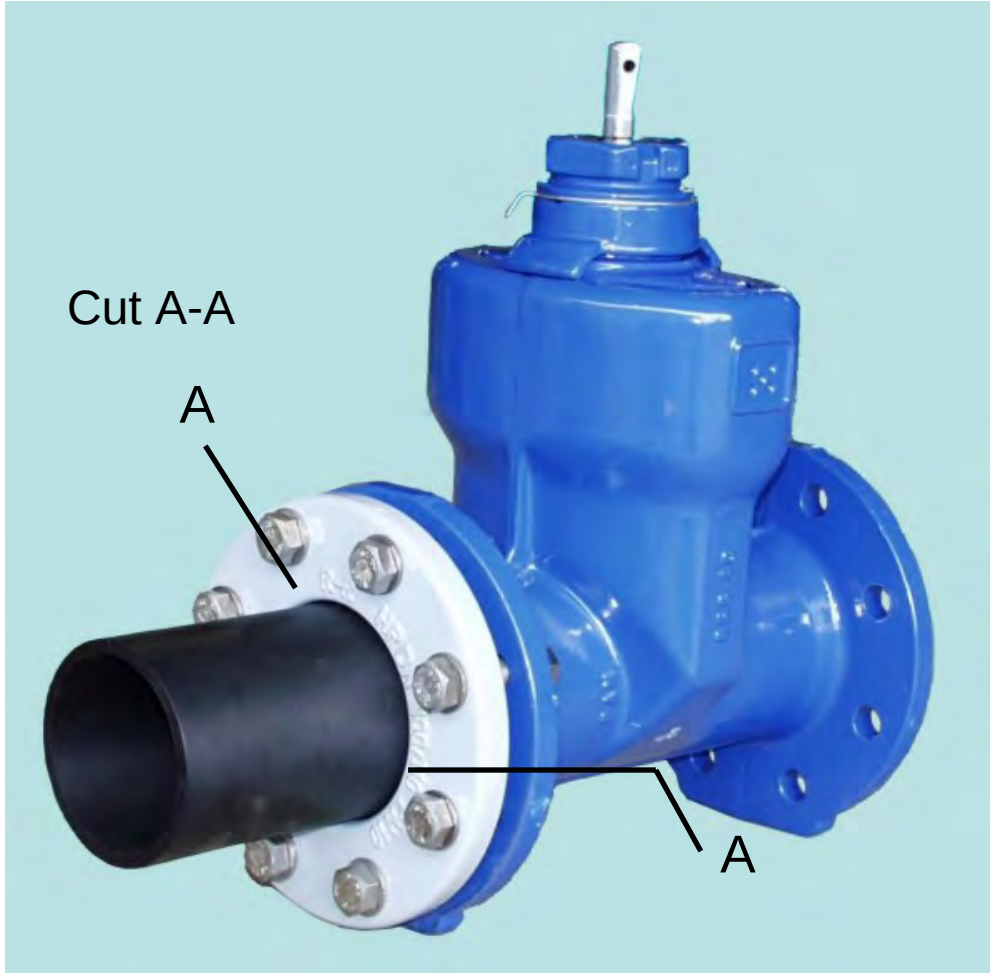
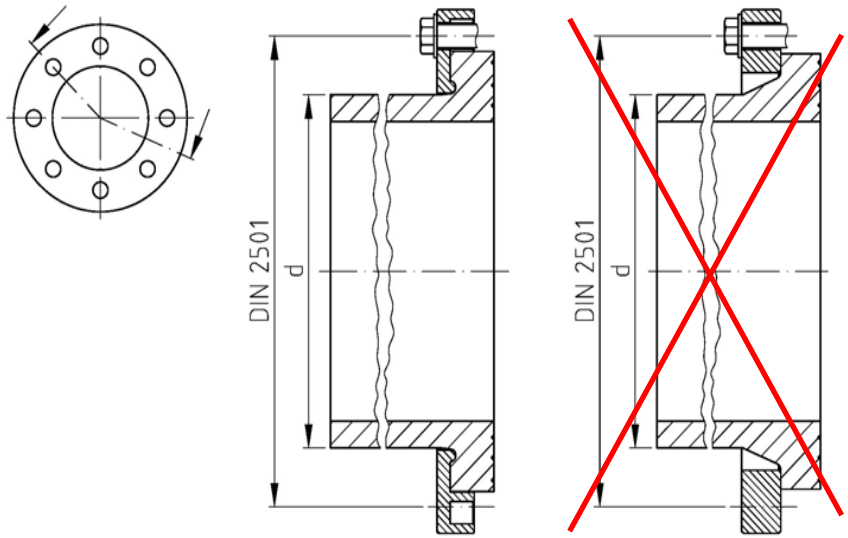
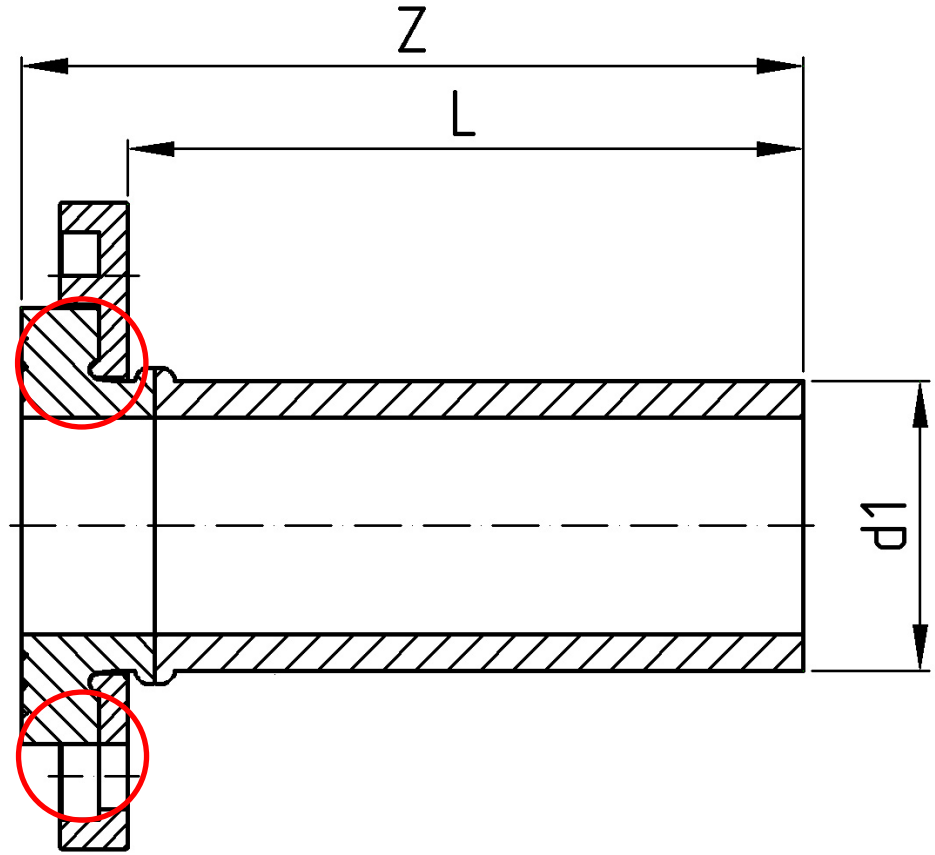
HP-FLANGE - connection PE to accessories - DN 50 - DN 600



alternative to F-pieces and stub ends with backing rings



HP-FLANGE, up to 25bar



HP-FLANGE, up to 25bar

PROFILE GASKET

a SAFE flange connection also needs as well a SAFE SEALING !

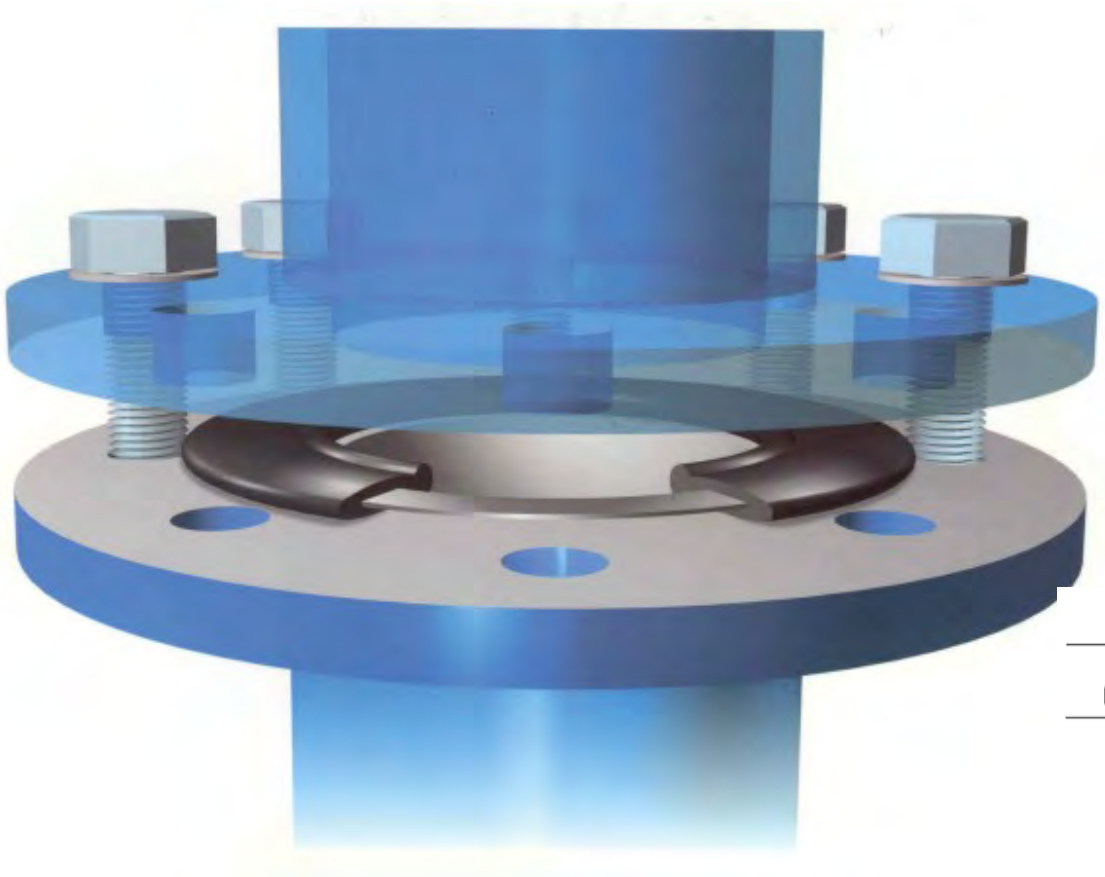
Most of the relaxation occurs during the first 50-100 hours
=> **re-tightening after one or two days is relevant**

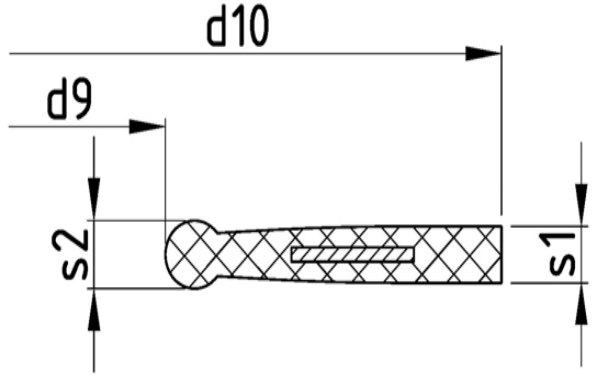
The **gaskets help to - distribute the pressure more evenly** and - possibly **smooth uneven flange surfaces**

Lars Jacobsson, Hans Andersson, Daniel Vennetti and Sven-Erik Sällberg

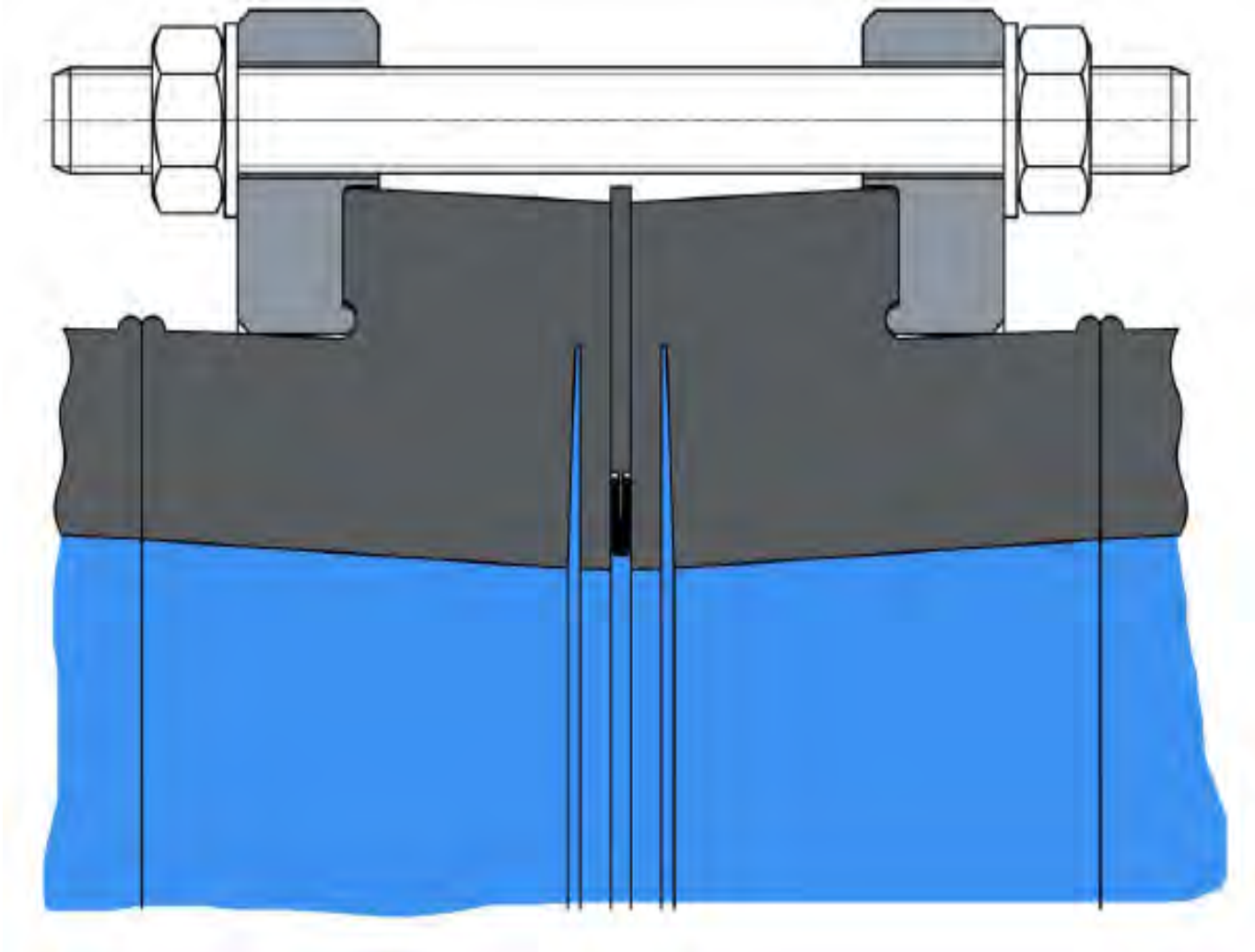
SP Technical Research Institute of Sweden, Göteborg, Sweden
Presented at the Plastic Pipes XVI Conference in Barcelona, September 2012

PROFILE GASKET





HP-SC Flange, stress compensation version



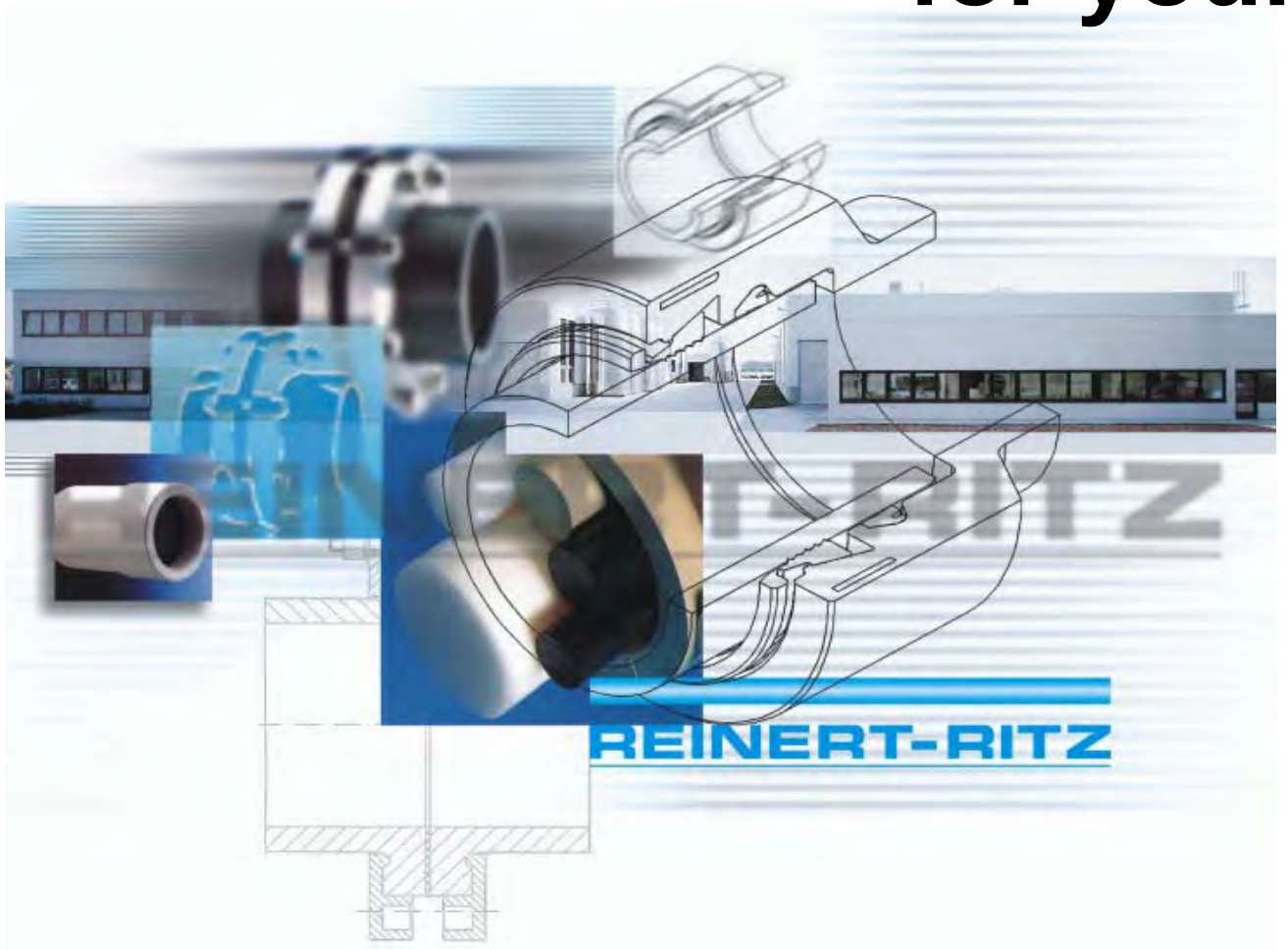
Conclusions

Concluding Statement

- PE 100 pipe is a wonderful material for laying long lengths of pipe
- PE 100 fittings give problems due to the same characteristics that make it wonderful to lay
- The definition and selection of the fittings to create a sustainable and beneficial pipe system can ensure marked reduction in water losses

solutions are readily available

Thank you very much
for your attention



EXTRA SHEETS DEALING WITH TEES / BRANCHES

1. design and practice examples
2. how not to do it
3. full pressure rated equal tee d900mm, under test
4. full pressure rated equal tee d900mm
5. full pressure rated equal tee d900mm, profile version
6. full pressure rated reduced tee d1200mm/DN 150
7. hydrostatic testing, equal branch, at 25bar
8. you need it, we can do it – multi-branch tee

EXTRA SHEETS DEALING WITH TEES / BRANCHES

PE and PP fully pressure rated large bore fittings, design and practice examples

- Increasing trend to larger diameter for PE pressure systems
- Economic development of fittings (more stability, reduced costs)
- Design, construction and rating

Hydrostatic Pressure Test - Mitred tees, d 900mm SDR17

20°C, 15bar,
< 1 Hour,
2pc out of 3pc
failed

BECETEL, Belgium - Hydrostatic Pressure Test

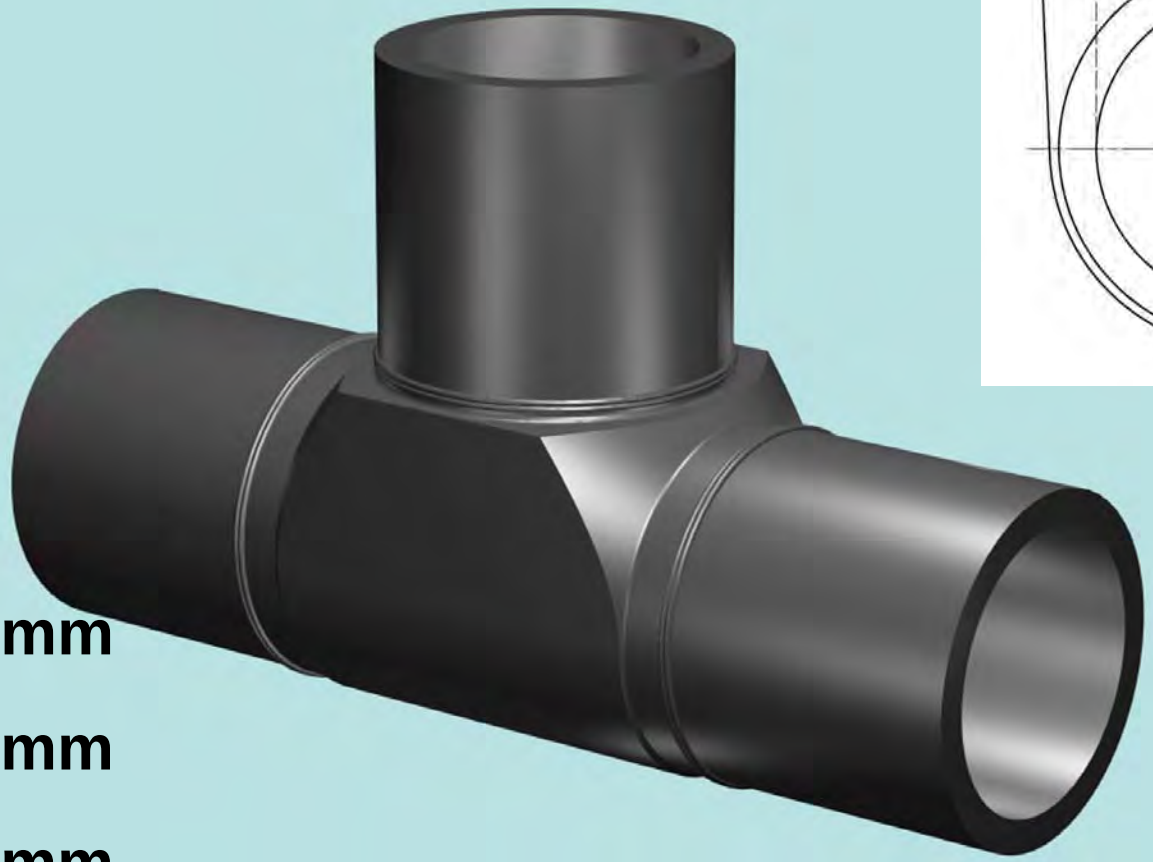
Test parameters

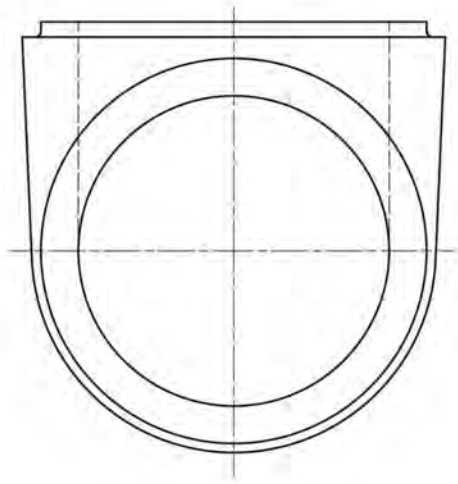
EN 12201-3
20°C, σ 12,4MPa,
100h

80°C, σ 5,5MPa,
165h

VMW- Water Company Antwerp (Belgium) d 900mm SDR17

PROFILE TEE - NEW GENERATION





d 560mm

d 630mm

d 710mm

d 900mm

REDUCED TEE - d 1200mm / DN 150

HYDROSTATIC STRENGTH TEST - TENSILE test, 25bar

FREE FLOW X-CROSS - for connection to hydrant