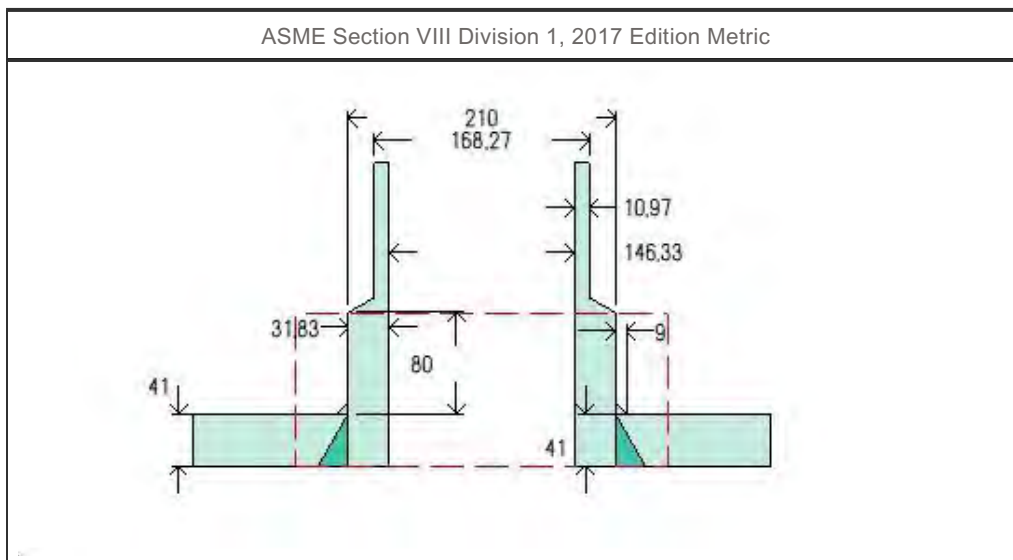


Nozzle (N03 (DN150))



Note: Per UW-16(b) minimum inside corner radius $r_1 = \min [1 / 4 * t, 3 \text{ mm}] = 3 \text{ mm}$

Location and Orientation	
Located on	Shell
Orientation	180°
Nozzle center line offset to datum line	14,150 mm
End of nozzle to shell center	3,791 mm
Passes through a Category A joint	No
Nozzle	
Access opening	No
Material specification	SA-182 F304 <= 125 (low stress) (II-D Metric p. 86, ln. 20)
Inside diameter, new	146.33 mm
Wall thickness, t_n	31.84 mm
Minimum wall thickness	10.97 mm
Corrosion allowance	0.25 mm
Projection available outside vessel, L_{pr}	250 mm
Heavy barrel length, L_{hb}	80 mm
Local vessel minimum thickness	41 mm
Liquid static head included	27.51 kPa
Longitudinal joint efficiency	1
Welds	
Inner fillet, Leg_{41}	9 mm
Nozzle to vessel groove weld	41 mm

UHA-51 Material Toughness Requirements Nozzle	
Material impact test temperature per UHA-51(a) =	-180°C
External nozzle loadings per UG-22 govern the coincident ratio used.	
Stress ratio = $t_r * E^* / (t_n - c) = 2.54 * 1 / (10.97 - 0.25) =$	0.2373