

Dimension and  
Calculation  
Code  
Discrepancy

# EN 10253-2 and 4

Butt-welding pipe fittings

Part 2: Non alloy and ferritic alloy steels ...

Annex A (Informative) Determination of pressure factors and wall thickness

Part 4: Wrought austenitic and austenitic-ferritic stainless steel (duplex) ...

Annex B (Normative) Determination of pressure factors and wall thickness

# EN 10253-4 Annex B 4.4 Example

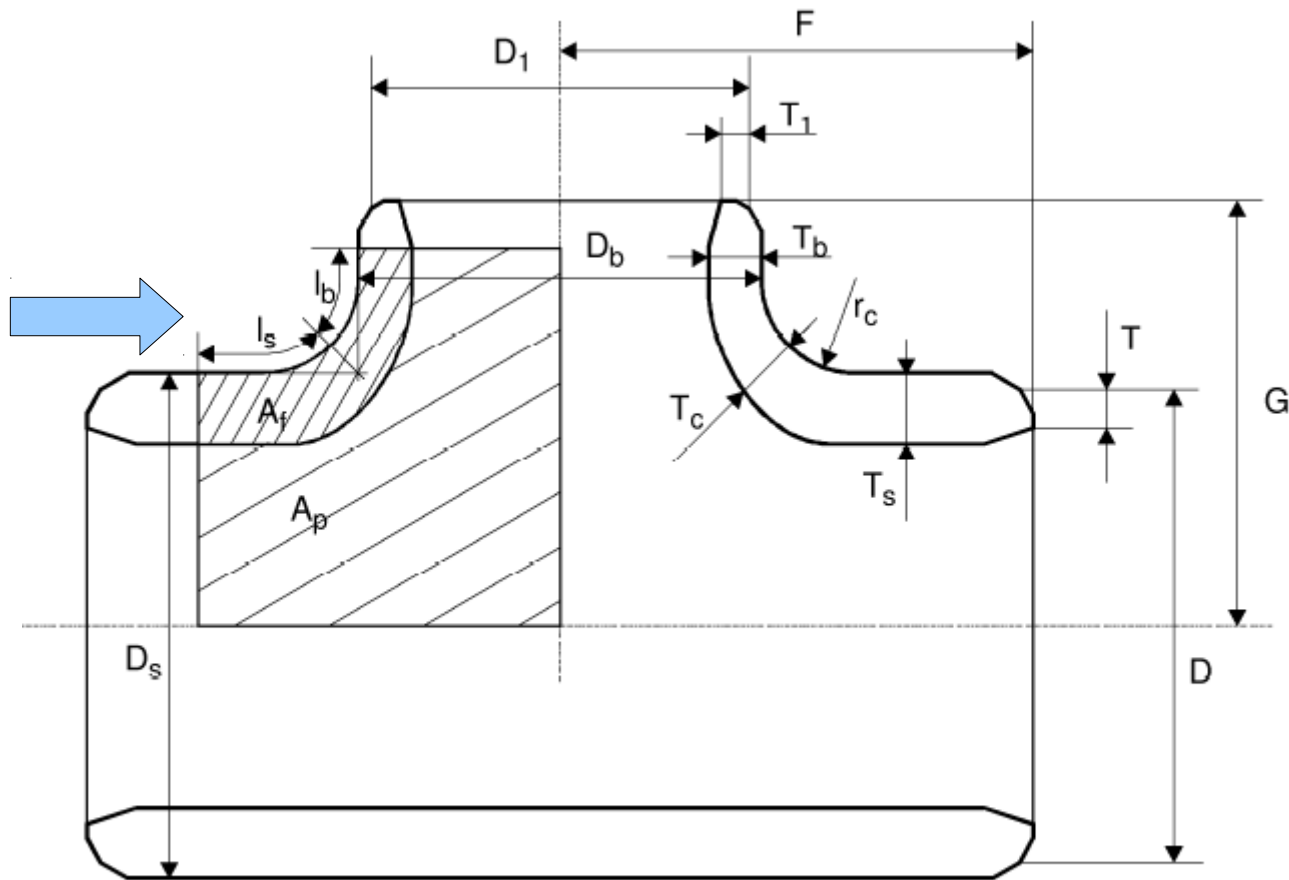
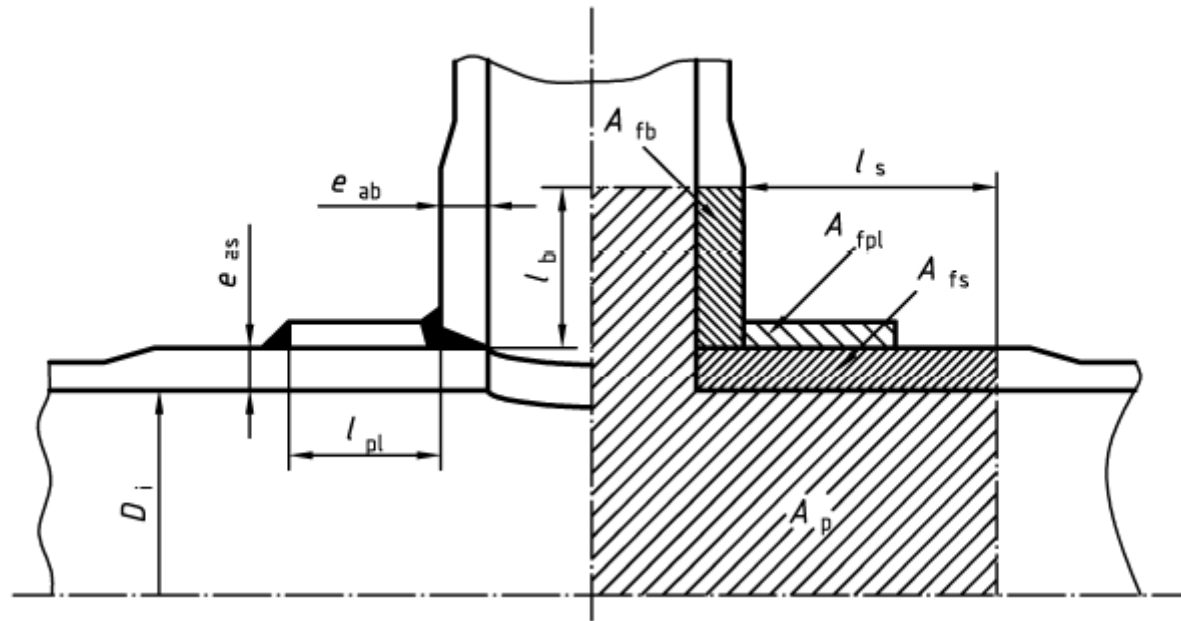


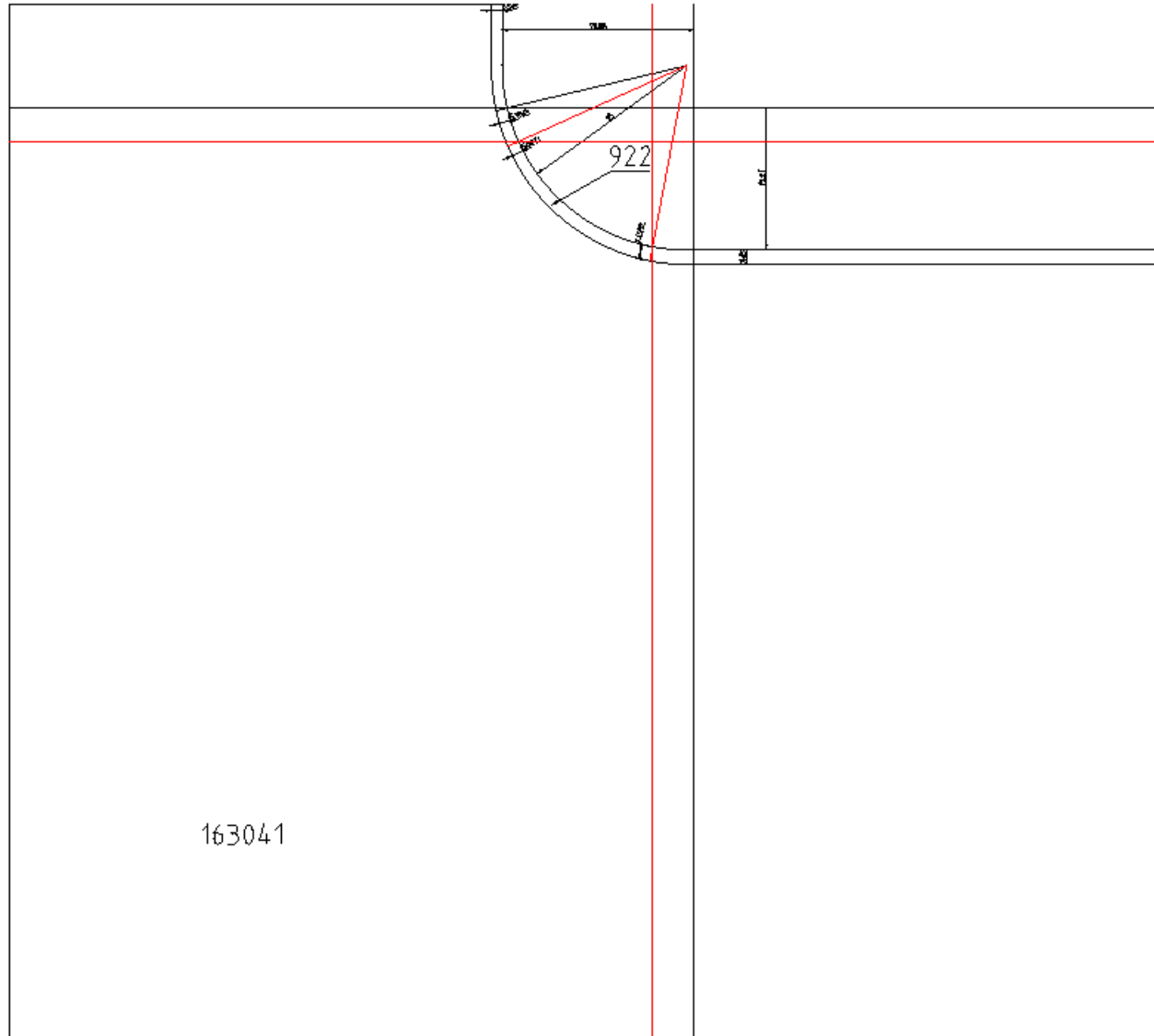
Figure B.5 — Dimensions and areas  $A_p$  and  $A_f$  of a tee

# EN 13480-3 Clause 8.4

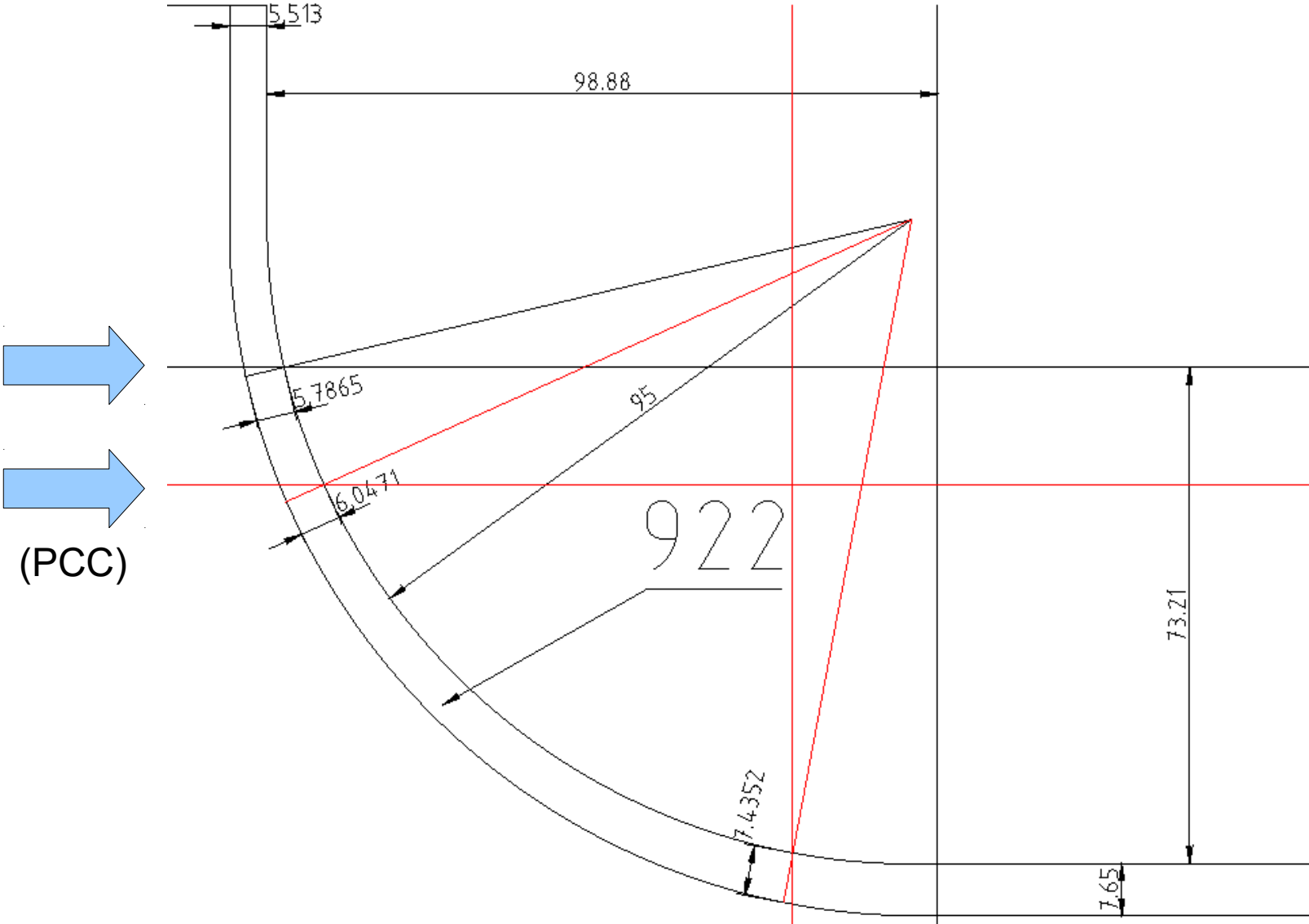


Red-Bag PCC calculation,  
as per this clause

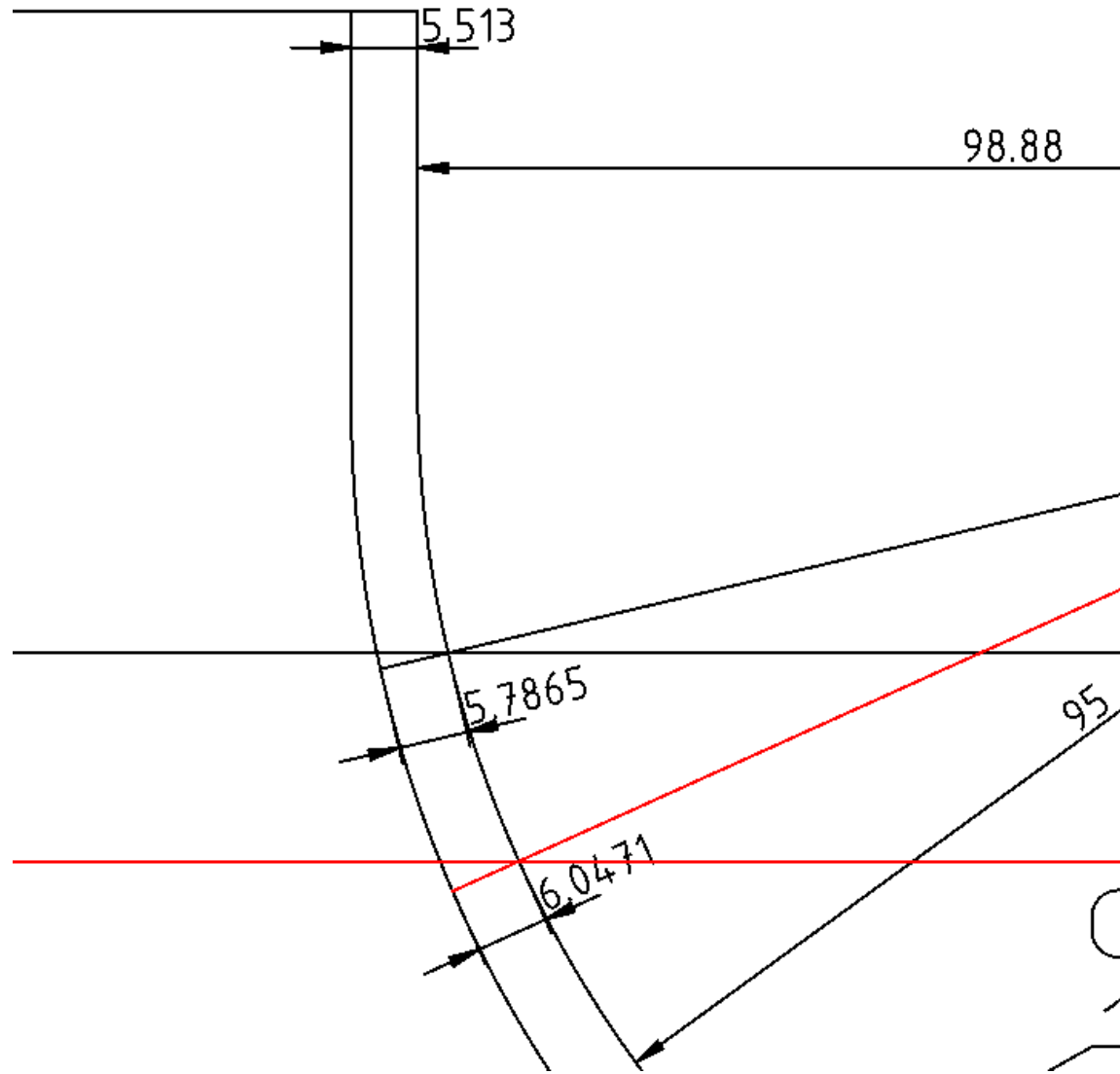
# EN 10253 - EN 13480 VALIDATION




# VALIDATION cont'd



# VALIDATION cont'd



# PCC VALIDATION

2	Corrosion allowance	c0	0.00	mm	
3	Tolerance	c1	0.00	%	(c1 = tol % / 100 e)
4	Joint coefficient	z	1.000	-	(0<=z<=1 default = 1)
5	Calculated values (* indicates at reinf. limit)				
6	Di* header at reinf. limit ls	Di*	801.11	mm	
7	eas* header at reinf. limit ls	eas*	7.43	mm	
8	di* branch at reinf. limit lb	di*	511.72	mm	
9	eab* branch at reinf. limit lb	eab*	6.05	mm	
10	eas = esn - c0 - c1	eas	7.65	mm	
11	eab = ebn - c0	eab	5.51	mm	(eab <= 2eas)
12	eac = ecn - c0 - c1	eac	6.58	mm	
13	Reinforcement				
14	ls = Min (W0 - do/2, Sqr(eas* (Di*+eas*)))		77.52	mm	
15	lb = Min (H0 - Do/2, Sqr(eab* (di*+eab*)))		55.91	mm	
16	Total material area	Af	652	mm <sup>2</sup>	
17	Total pressure area	Ap	150132	mm <sup>2</sup>	



# EN 10253 CONCLUSION

## B.5.3 Tees

The wall thickness of tees cannot be calculated directly, but shall be assumed in a first step. This assumption shall then be verified by means of the described method. This method leads to a relation between the pressure loaded area  $A_p$  and the stress loaded cross section area  $A_f$  shown in Figure B.5. Under certain circumstances, the calculation may need to be repeated using an improved assumption of the wall thickness.