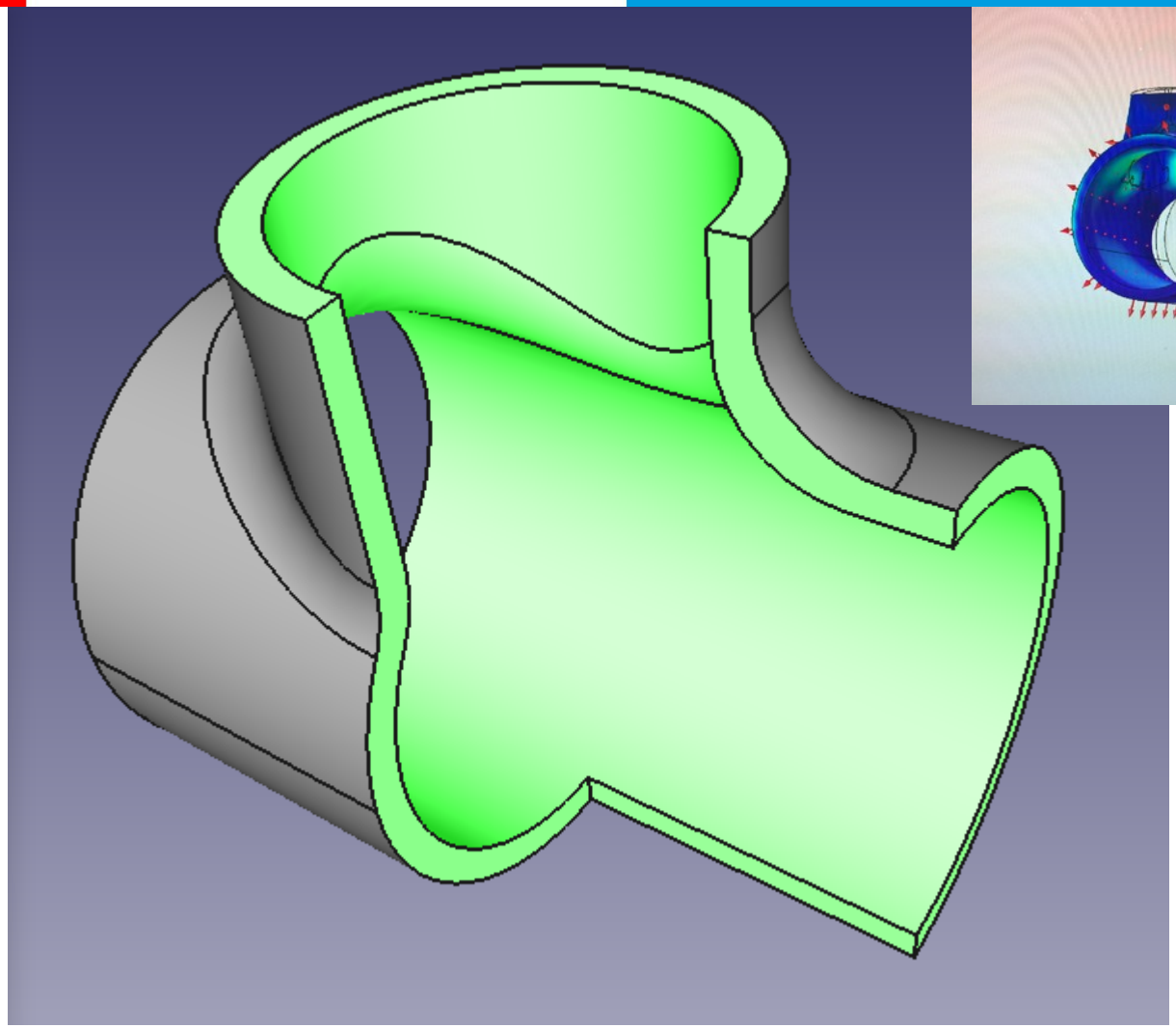


Dimension and Calculation Code Discrepancy

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

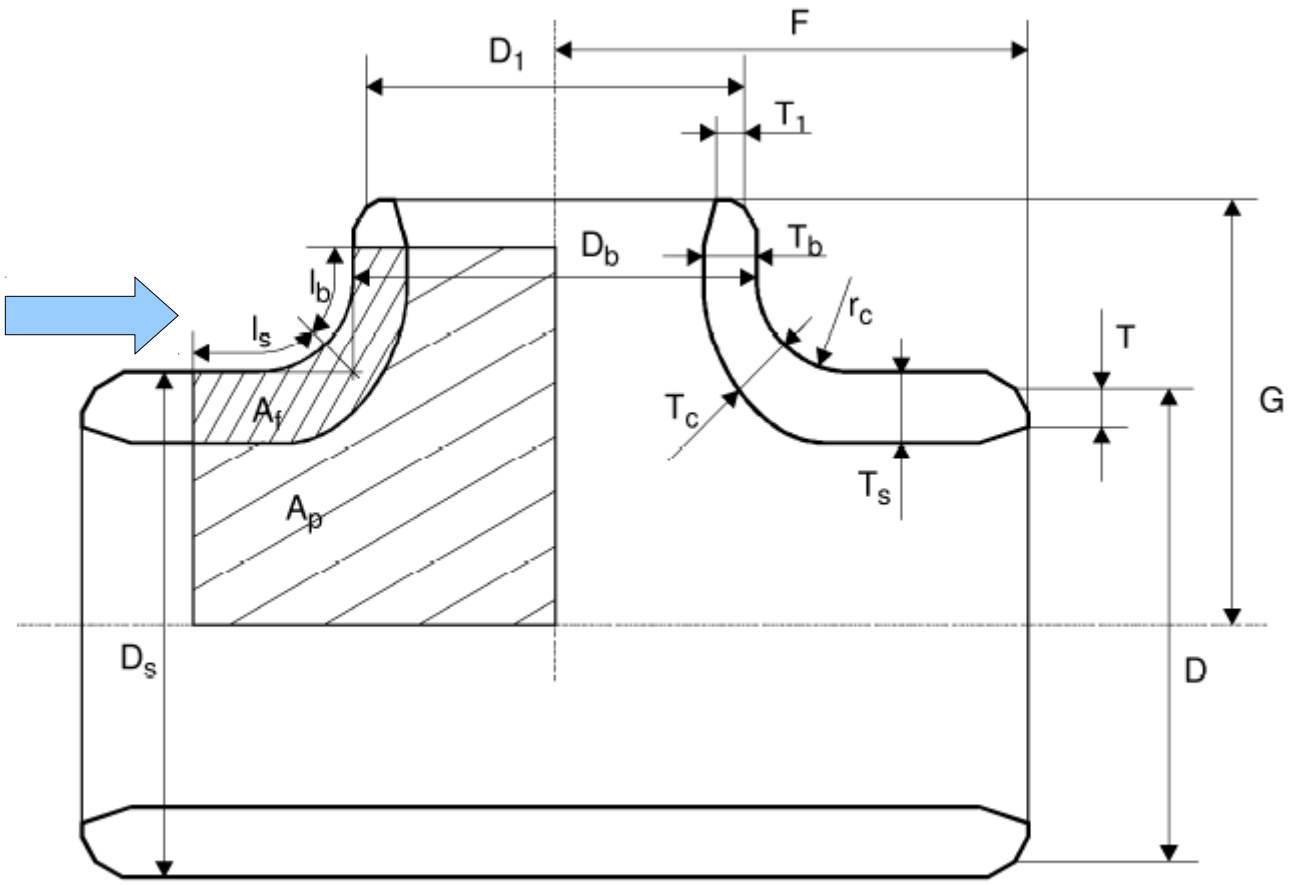
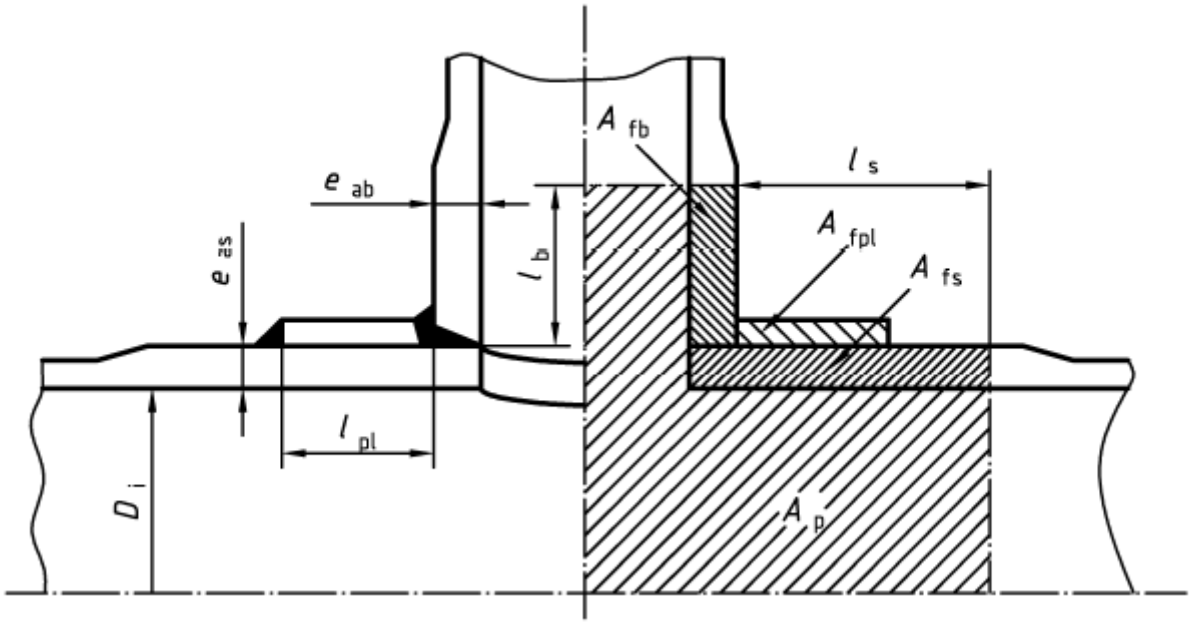


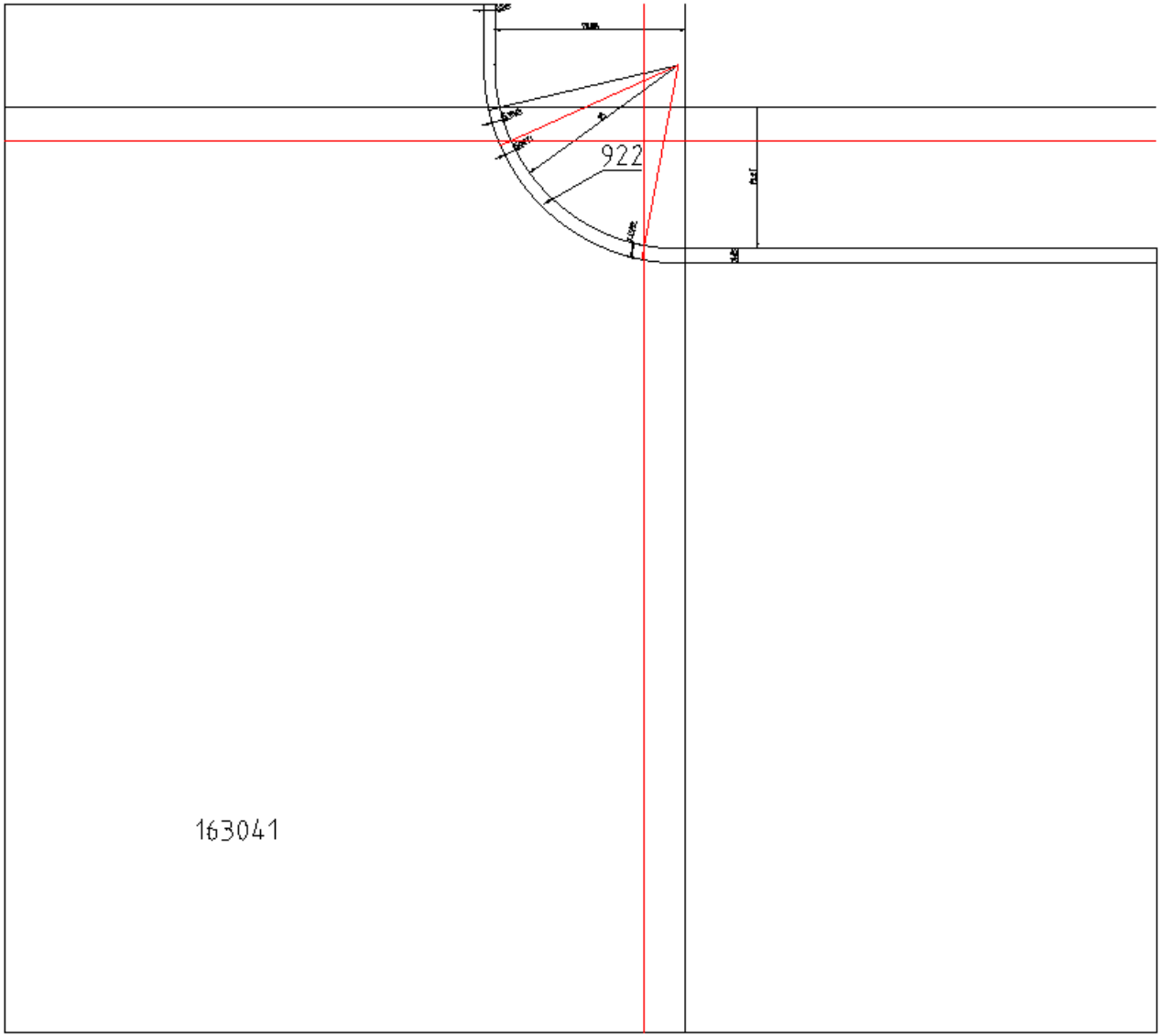
Figure B.5 — Dimensions and areas A_p and A_f of a tee

EN 13480-3 Clause 8.4

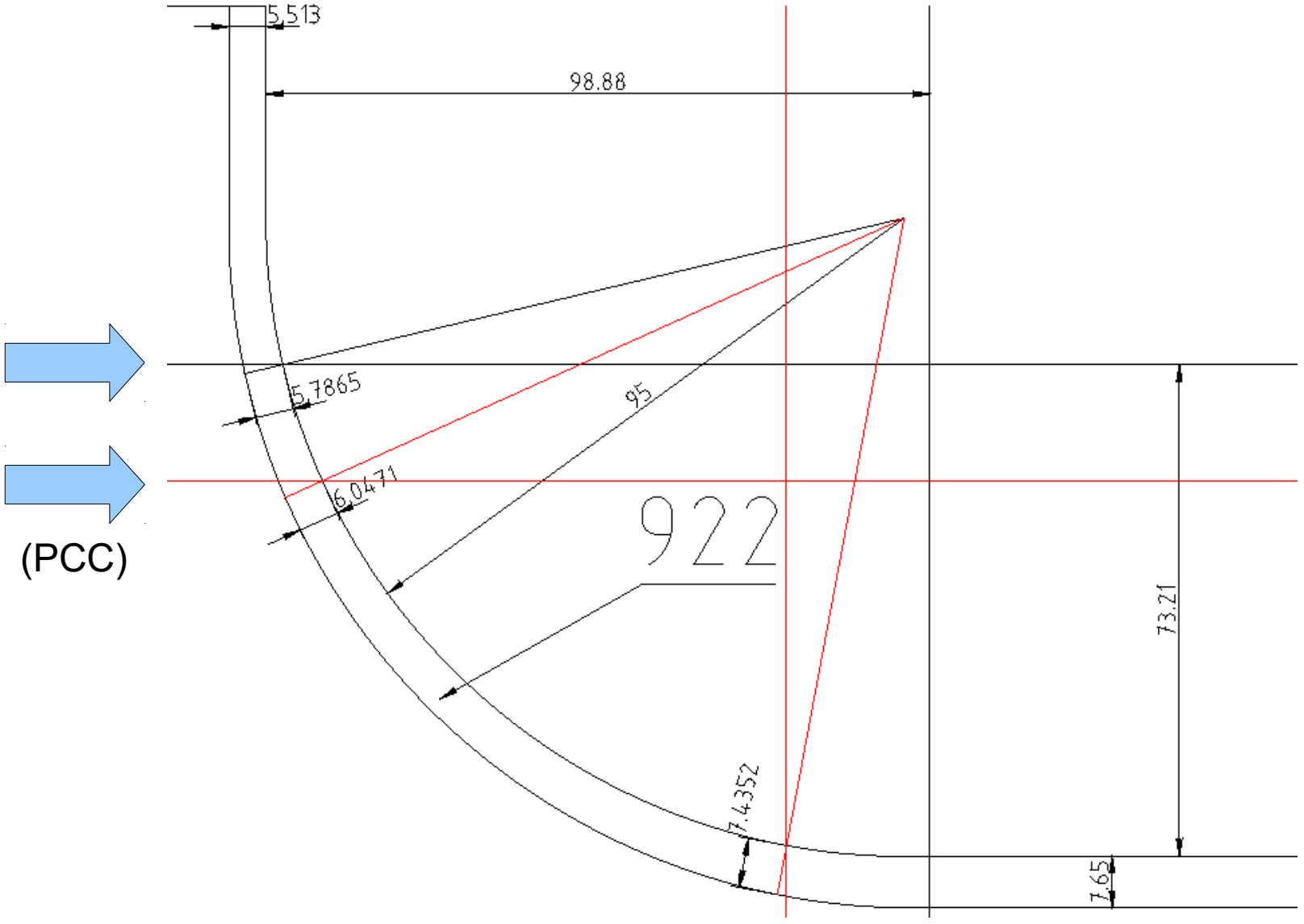


Red-Bag PCC calculation,
as per this clause

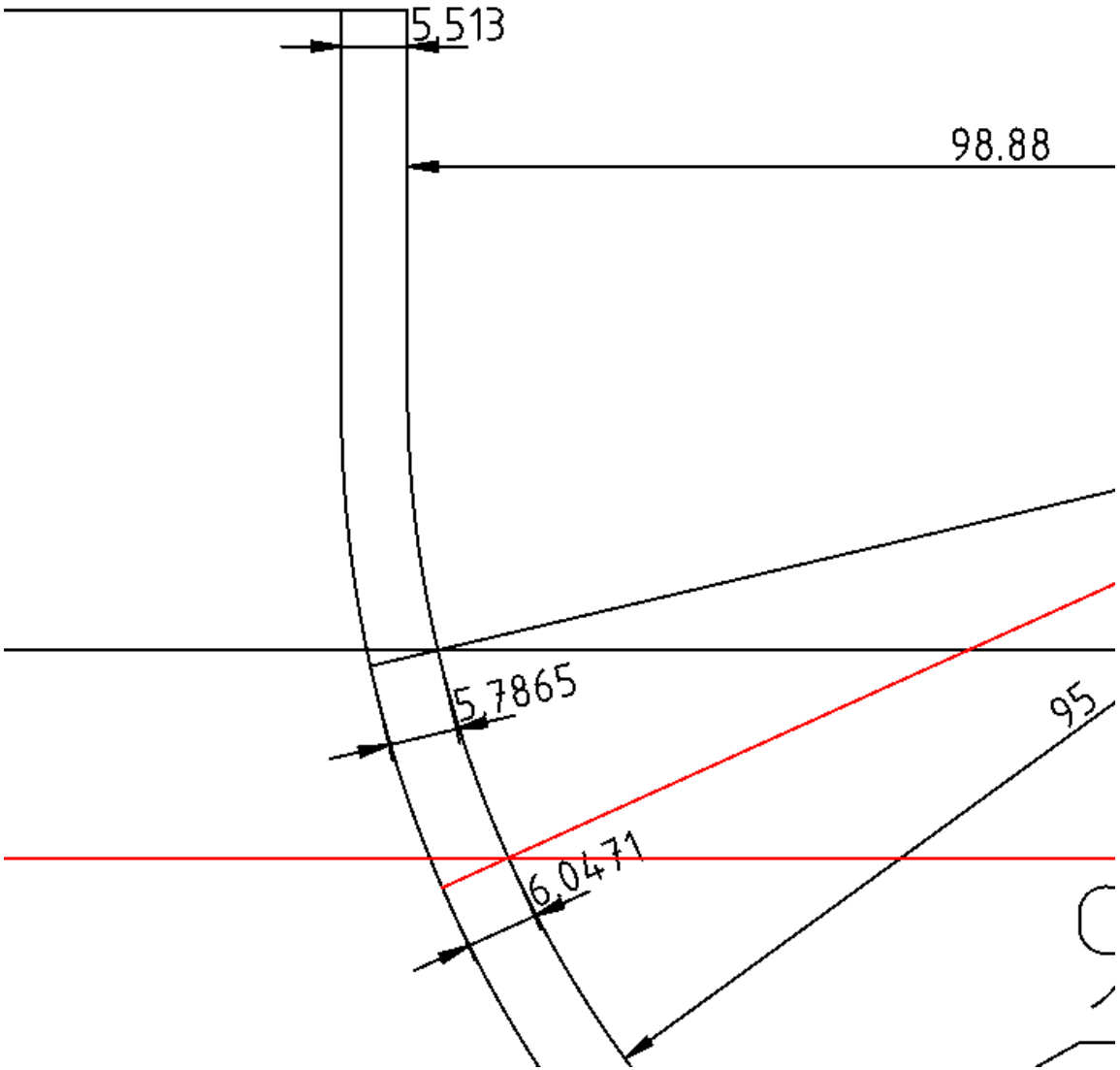
EN 10253 - EN 13480 VALIDATION



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	mm²	
17	Total pressure area	Ap	150132	mm²	

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 Ap and the stress loaded cross section area Af shown in Figure B.5. Under certain circumstances, the calculation may need to be repeated using an improved assumption of the wall thickness.