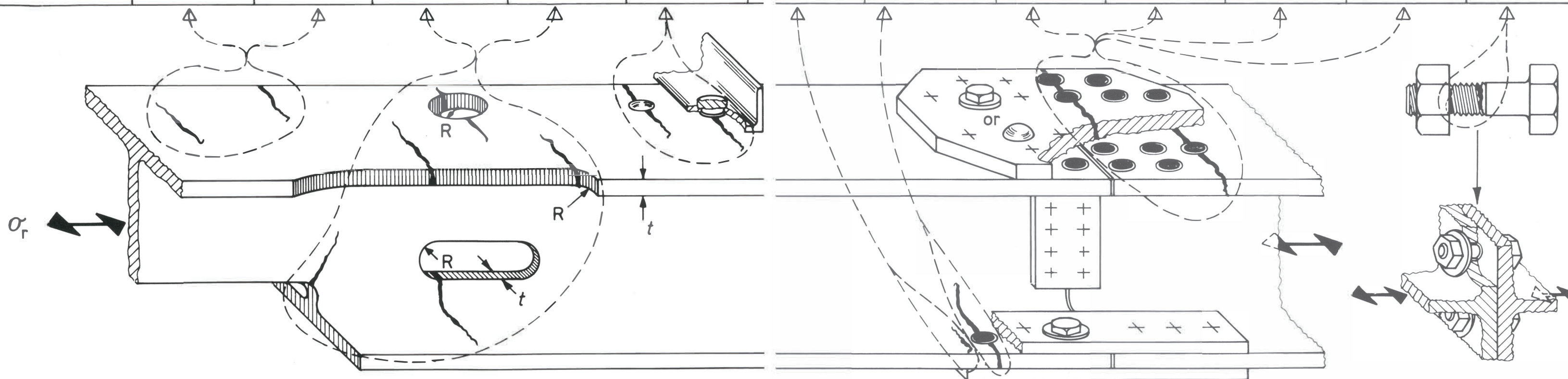


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Table 17. Classification of details

(a) Non-welded details

Product form	Rolled steel structural plates and sections										Threaded fasteners	
Location of potential crack initiation	Away from all welding											
	Away from all structural connections											
	On a member of constant or smoothly varying cross section	At any external or internal edge		At a small hole (may contain bolt for minor fixtures)	At a lapped or spliced connection fastened with:	In a butt joint, fastener axis parallel to σ_r						
Dimensional requirements	No holes	Any aperture or re-entrant corner radius $\geq t$		Hole diameter $\leq 3t$	High strength friction grip bolts	rivets	precision bolts	black bolts				
	No re-entrant corners				At a hole	In thread root						
Manufacturing requirements (see also Part 6)	All surfaces fully machined and polished	Edges as rolled or machined smooth	Any flame cut edges subsequently machined or ground smooth	Hole drilled or reamed	Double covered symmetrical joints only			Close tolerance hole				
	No flame cutting		Any cutting of edges by planing or		Torque to full capacity or use lock nuts			Bolts to BS 3692 or BS 4395 Screw threads to BS 3643 : Part 2				
				Machine flame cutting with controlled procedure								
Special inspection requirements												
Design stress area			Net cross section		Core area	Net cross section			Core area (minor diameter)			
Special design stress parameter			Use stress concentration factor for apertures or re-entrant corners		Designed for slip at ultimate load (see Part 3)					See 7.5		
Type number	1.1	1.2	1.3*	1.4*	1.5*	1.6*	1.7	1.8	1.9	1.10	1.11	1.12*
Maximum permitted class	(A) C	(B) C	(B) C	(C) D	D	C	C	D	D	E	G [‡]	B



Key Typical fatigue crack location Cut edge Fastener Direction of stress fluctuation

* See H.2.3.

‡ Classifications that should be used with caution.

() Classifications which may be used if special high levels of workmanship above those specified in Part 6 of this British Standard are achieved.