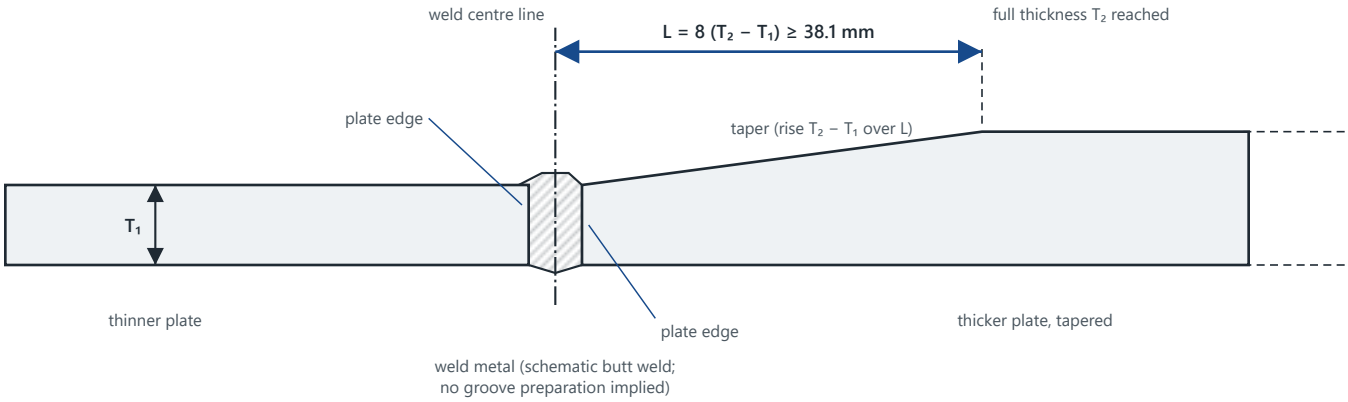
Joining plates of unequal thickness — taper on the thicker plate

Rule printed in IBR 2026 Fig. 12/1: L = 8 (T_2 − T_1), but not less than 38.1 mm. Cited by regs. 86 and 402.



Worked illustration (hypothetical values)

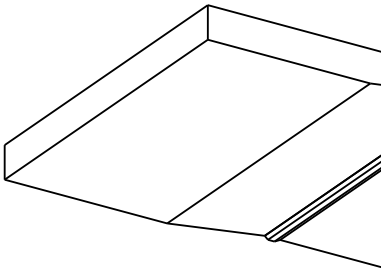
T_1 = 12 mm, T_2 = 20 mm

8 × (T_2 − T_1) = 8 × 8 = 64 mm → more than 38.1 mm, so L = 64 mm

If T_2 − T_1 were 3 mm: 8 × 3 = 24 mm < 38.1 mm, so L = 38.1 mm would govern.

As in Fig. 12/1, L runs from the weld centre line to where the thicker plate is at full T_2.

Reg. 402: weld matched to the thinner plate, with the tolerance for the thinner plate.



3-D model (FreeCAD) — taper runs acros

Shows the geometry rule only. Weld preparation, NDT and tolerances follow the regulations, the approved WPS and the Gazette figure.

INDEPENDENT EDUCATIONAL REFERENCE — NOT AN APPROVED, CERTIFIED, FABRICATION-READY OR CODE-COMPLIANT DESIGN.
Verify against the official Gazette (IBR 2026), amendments and project specifications.
IBRsource — independent; not affiliated with the Government of India or the Central Boilers Board.

Figure: fig-tapered-plate-transition Rev B
Section 5:1 on sheet; model 1:1 mm
Date: 2026-11-20
Engineering review: in progress