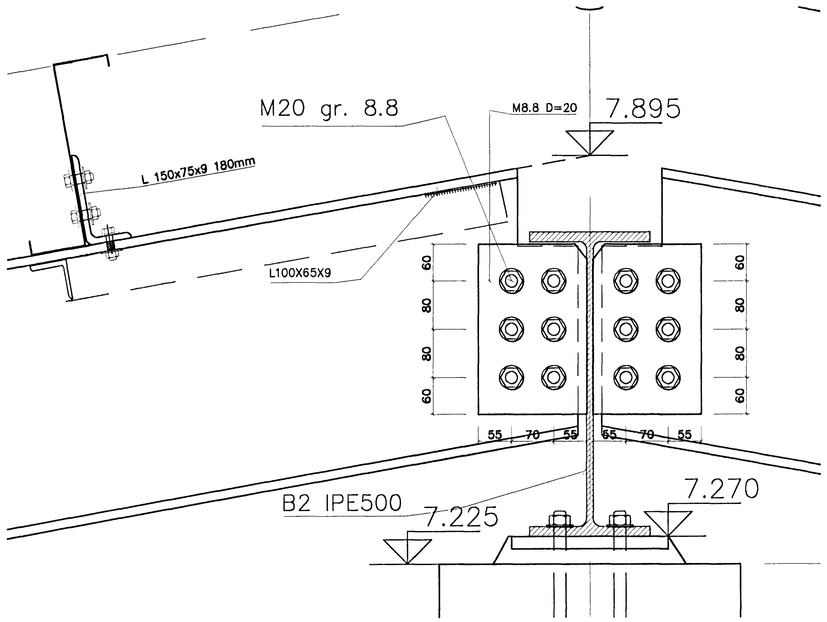
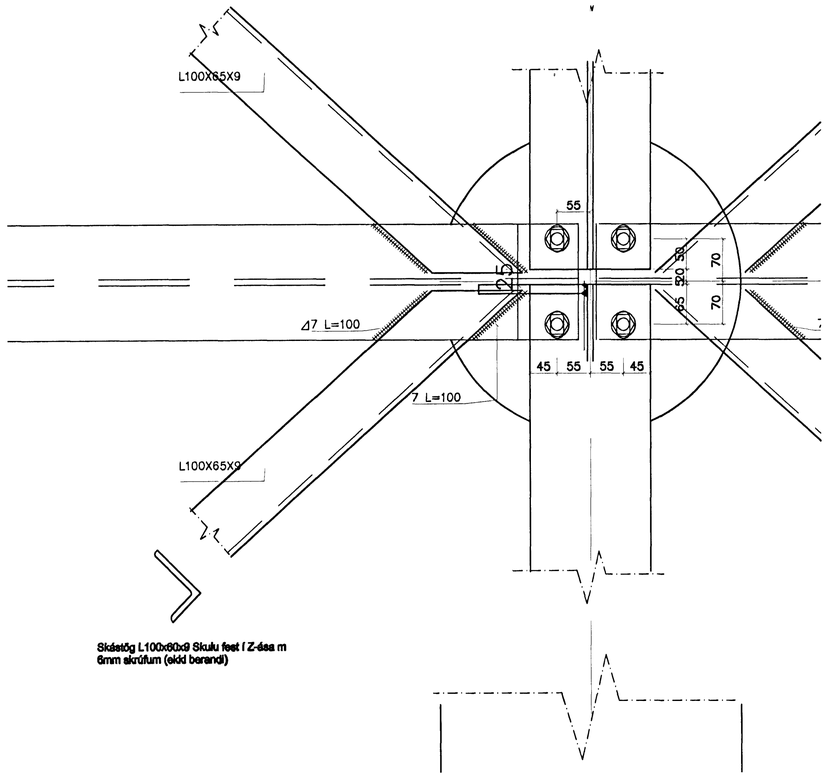



## I– PROFILE STAGS WELDINGS AND STTIONS




Skástóg L100x65x9 Skulu fest í Z-ása m
6mm skrúfum (eidd berandi)

## STRUCTURAL STEEL WELDS, RT ACCEPTANCE CRITERIA

| Type of defect | Inspection category A, B | Inspection category C, D, E |
|---|---|---|
| Internal porosity (Note 1) | | |
| Isolated: Pore diameter | max t/4, but max. 6 mm | max t/3, but max. 6 mm |
| Cluster: Pore diameter | max 3 mm | max. 4 mm |
| Scattered: Accumulated pore diameters in any 10x150 mm area of weld | max 20 mm | max. 25 mm |
| Slag inclusions, or piping porosity (Note 2) | | |
| Width | t/4, max. 6 mm | t/3, max. 6 mm |
| Length (Note 3) | 2t, max 50 mm | 4t, max. 100 mm |
| Incomplete penetration, lack of fusion Length (Note 2) | t, max. 25 mm | 2t, max. 50 mm |
| Cracks | Not acceptable | Not acceptable |

Notes:
1. If more than one pore is located inside a circle of diameter 3 times the pore diameter, the pores are to be considered as a cluster.
2. Defects in a line where the distance between the defect is shorter than the longest defect shall be regarded as one continuous defect.
3. No length limitation for width < 2 mm for t > 20 mm and for width < 1 mm for t < 20 mm.

Table 9.5 Structural steel welds. UT acceptance criteria.

| Description | Inspection category A + B | Inspection category C, D, E | Notes |
|---|---|---|---|
| General | If the type of defect can not be ascertained with certainty the defect shall be repaired when the length exceeds 10 mm and the echo height exceeds the reference curve. | | 1 2 3 4 |
| Cracks | Unambiguous cracks are unacceptable regardless of size or amplitude. | | |
| Lack of fusion or incomplete penetration | Internal defects:<br>I: The echo height exceeds the reference curve:<br>Max length t, max 25 mm<br>II: The echo height is between 50 and 100% of the reference curve:<br>Max length 2t, max 50 mm<br>Surface defects are not acceptable except:<br>For root defects in single sided welds, the max length for which the echo height exceeds the reference curve shall be:<br>Max length t, max 25 mm | Max length 2t, max 50 mm<br>Max length 4t, max 100 mm<br>Max length 2t, max 50 mm | 1 2 3 4 5 |
| Slag inclusions | When echo height exceeds the reference curve:<br>Max length 2t, max 50 mm | Max length 4t, max 100 mm | 1 2 |
| Porosity | Repair is required if porosity may mask for other defects. | | 1 |

Notes:
1. Type of defect shall be decided by:
   I: Supplementary non-destructive testing.
   II: The ultrasonic operator's assessment of the defect, using his knowledge of the welding process, signal geometry, defect position etc.
2. If elongated defects are situated on line and the distance between them is less than the length of the longest indication, the defects shall be evaluated as one continuous defect.
3. Defect length shall be determined by the 6dB drop method from the end of the defect (for defects larger than the beam) or by the maximum amplitude technique (for defects smaller than the beam).
4. With UT performed from only one side of the weld with only one surface accessible, the acceptable echo heights are reduced from 100% to 50% and from 50% to 20%, respectively.
5. With "internal defects" it is meant defects which are located more than 6 mm from the nearest surface. A defect is classified as a "surface defect" if any part of the defect is located less than 6 mm or t/4, whichever is smaller, from the nearest surface.

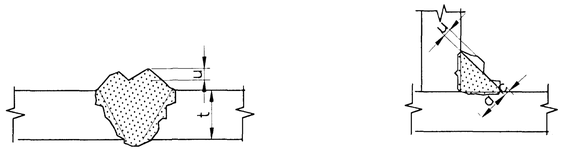



Fig 1 Roughness of Weld

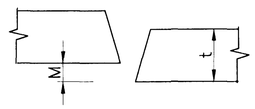



Fig 2 Misalignment of weld

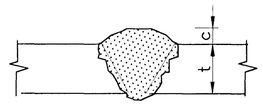



Fig 3 Reinforsment of butt weld

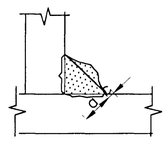



Fig 4 Reinforsment of fillet weld

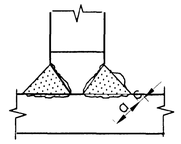



Fig 4a Reinforsment of partial pen. weld

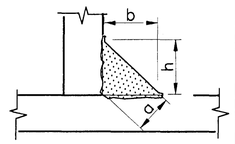



Fig 5 Symmetry of fillet weld

| Breyting nr. | Lýsing breytinga | Dags breytt | Undirrit. | Yfirfarið |
|---|---|---|---|---|
| | | | | |

Samþykkt þann 27 NÓV. 2000
Byggingafulltrúinn í Hafnarfirði
F.h. Sigurbjartur Halldórsson

TEIKNISTOFAN NÝBÝLI
Nýbýlavegur 22 200 Kópavogur
Sími 554-0098 Kt. 180449.4699

| Tilvís | Magn | Undirritun: | Verk nr. 323 | |
|---|---|---|---|---|
| Hannað af S.Ingi | Yfirfarið af | Samþykkt af | Skráarnafn skut1 | Dags. 21.10.99 | Kvarði 1:100 |

SKÚTUHRAUN 6 HAFNARF.
BEARING ROOF BEAMS

STEEL CONSTRUCTIONS

7 | Útgáfa 0 | Blað 7/7