

DIN EN ISO 2553:2022-07 (E)

Welding and allied processes - Symbolic representation on drawings - Welded joints (ISO 2553:2019, Corrected version 2021-09)

| Contents | | Page |
|--|--|-------------|
| European foreword | | 4 |
| Foreword | | 5 |
| Introduction | | 6 |
| 1 Scope | | 7 |
| 2 Normative references | | 7 |
| 3 Terms and definitions | | 7 |
| 4 Welding symbol | | 11 |
| 4.1 General | | 11 |
| 4.2 Basic welding symbol | | 11 |
| 4.3 Welding symbol systems | | 12 |
| 4.4 Elementary symbols | | 12 |
| 4.4.1 General | | 12 |
| 4.4.2 Combinations of elementary symbols | | 15 |
| 4.4.3 Double-sided butt welds | | 15 |
| 4.5 Supplementary symbols | | 16 |
| 4.5.1 General | | 16 |
| 4.5.2 Weld-all-around symbol | | 19 |
| 4.5.3 Welds of the same type made from point to point | | 20 |
| 4.5.4 Field welds | | 21 |
| 4.5.5 Root reinforcement — Butt welds made from one side | | 21 |
| 4.5.6 Welds on flanged butt and flanged corner joints | | 21 |
| 4.6 Arrow line | | 23 |
| 4.6.1 General | | 23 |
| 4.6.2 Multiple arrow lines | | 23 |
| 4.6.3 Broken arrow line | | 23 |
| 4.7 Reference line and weld location | | 24 |
| 4.7.1 Reference line | | 24 |
| 4.7.2 Weld location | | 24 |
| 4.7.3 Multiple reference lines | | 25 |
| 4.8 Tail | | 26 |
| 5 Dimensioning of welds | | 27 |
| 5.1 General | | 27 |
| 5.2 Cross-sectional dimensions | | 27 |
| 5.3 Length dimensions | | 27 |
| 5.3.1 General | | 27 |
| 5.3.2 Intermittent welds | | 27 |
| 5.4 Butt welds | | 28 |
| 5.4.1 Penetration depth | | 28 |
| 5.4.2 Double-sided welds | | 28 |
| 5.4.3 Flanged butt welds | | 28 |
| 5.4.4 Flare bevel and flare-V butt welds | | 28 |
| 5.5 Fillet welds | | 28 |
| 5.5.1 Weld size | | 28 |
| 5.5.2 Deep penetration fillet welds | | 28 |
| 5.6 Plug welds in circular holes | | 29 |
| 5.7 Plug welds in elongated holes (slots) | | 29 |
| 5.8 Spot welds | | 29 |
| 5.9 Seam welds | | 29 |

| | | |
|----------|--|-----------|
| 5.10 | Edge welds..... | 29 |
| 5.11 | Stud welds..... | 29 |
| 5.12 | Overlay welds..... | 30 |
| 5.13 | Stake welds..... | 30 |
| 6 | Dimensioning of joint preparations..... | 43 |
| 6.1 | General..... | 43 |
| 6.2 | Root gap..... | 43 |
| 6.3 | Included angle..... | 43 |
| 6.4 | Root radius and depth of root faces — U and J butt joints..... | 44 |
| 6.5 | Depth of joint preparation..... | 44 |
| 6.6 | Countersink angle for plug welds..... | 45 |
| 7 | Alternative butt weld symbol with required weld quality..... | 45 |
| 7.1 | General..... | 45 |
| 7.2 | Example..... | 46 |
| | Annex A (informative) Examples of the use of welding symbols..... | 47 |
| | Annex B (informative) Tolerances and transition points for weld types..... | 57 |
| | Annex C (informative) Alternative methods for designating intermittent butt and fillet welds..... | 58 |
| | Bibliography..... | 61 |