

## Designation examples of this Standard

**ISO 9606-1 141 T BW FM4 S s3.6 D60 PH ss nb**

INTERNATIONAL STANDARD

welding process

product type

type of weld

filler material grouping

filler material

dimension of test piece

welding position

weld details

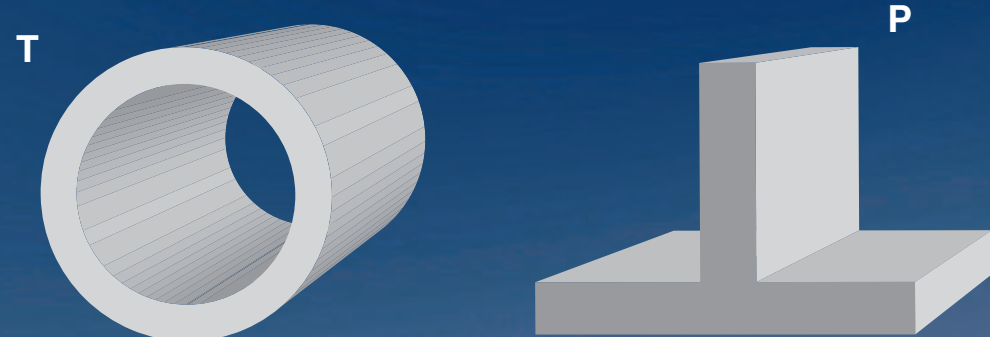
### welding processes

according to EN ISO 4063

- 111 manual metal arc welding
- 114 self-shielded tubular cored arc welding
- 121 submerged arc welding with solid wire electrode (partly mechanized)
- 125 submerged arc welding with tubular cored electrode (partly mechanized)
- 131 MIG welding with solid wire electrode
- 135 MAG welding with solid wire electrode
- 136 MAG welding with flux cored electrode
- 138 MAG welding with metal cored electrode
- 141 TIG welding with solid filler material (wire/rod)
- 142 autogenous TIG welding
- 143 TIG welding with tubular cored filler material (wire/rod)
- 145 TIG welding using reducing gas and solid filler material (wire/rod)
- 15 plasma arc welding
- 311 oxyacetylene welding

### product types

- T Tube
- P Plate

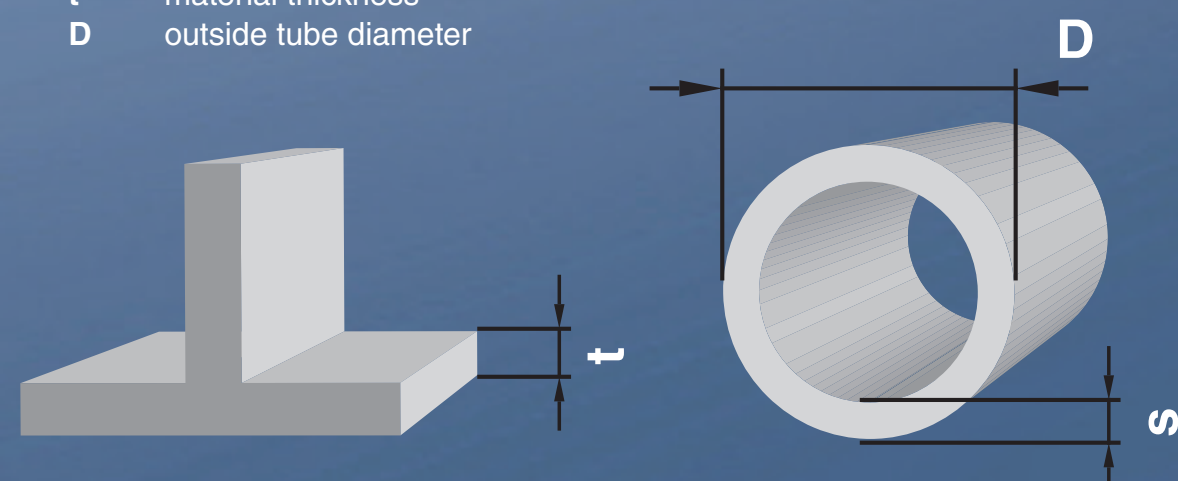


### filler material grouping

Group	Filler material for welding of	Examples of applicable standards
FM1	Non-alloy and fine grain steels	ISO 2560, ISO 14341, ISO 636, ISO 14171, ISO 17632
FM2	High-strength steels	ISO 18275, ISO 16834, ISO 26304, ISO 18276
FM3	Creep-resisting steels Cr < 3,75 %	ISO 3580, ISO 21952, ISO 24598, ISO 17634
FM4	Creep-resisting steels 3,75 ≤ Cr ≤ 12 %	ISO 3580, ISO 21952, ISO 24598, ISO 17634
FM5	Stainless and heat-resisting steels	ISO 3581, ISO 14343, ISO 17633
FM6	Nickel and nickel alloys	ISO 14172, ISO 18247

### dimensions of test piece

- s deposited thickness
- t material thickness
- D outside tube diameter



### types of weld

- BW butt weld
- FW fillet weld



### filler material

covered electrodes

Route A

- A acid covering
- B basic covering or electrode core – basic
- C cellulosic covering
- R rutile covering or electrode core – rutile, slow-freezing slag
- RA rutile – acid covering
- RB rutile – basic covering
- RC rutile – cellulosic covering
- RR rutile – thick covering

Route B

- 03 rutile basic covering
- 10 cellulosic covering
- 11 cellulosic covering
- 12 rutile covering
- 13 rutile covering
- 14 rutile + iron powder covering
- 15 basic covering
- 16 basic covering
- 18 basic + iron powder covering
- 19 limenite covering
- 20 iron oxide covering
- 24 rutile + iron powder covering
- 27 iron oxide + iron powder covering
- 28 basic + iron powder covering
- 45 basic covering
- 48 basic covering

cored wire

- M metal cored electrode or metal powder electrode core – rutile, fast-freezing slag
- P electrode core – rutile or basic/fluoride
- V electrode core – rutile or basic/fluoride
- W electrode core – basic/fluoride, slow-freezing slag
- Y electrode core – basic/fluoride, fast-freezing slag
- Z electrode core – other types

any other

- S solid wire electrode – solid rod
- nm no filler material

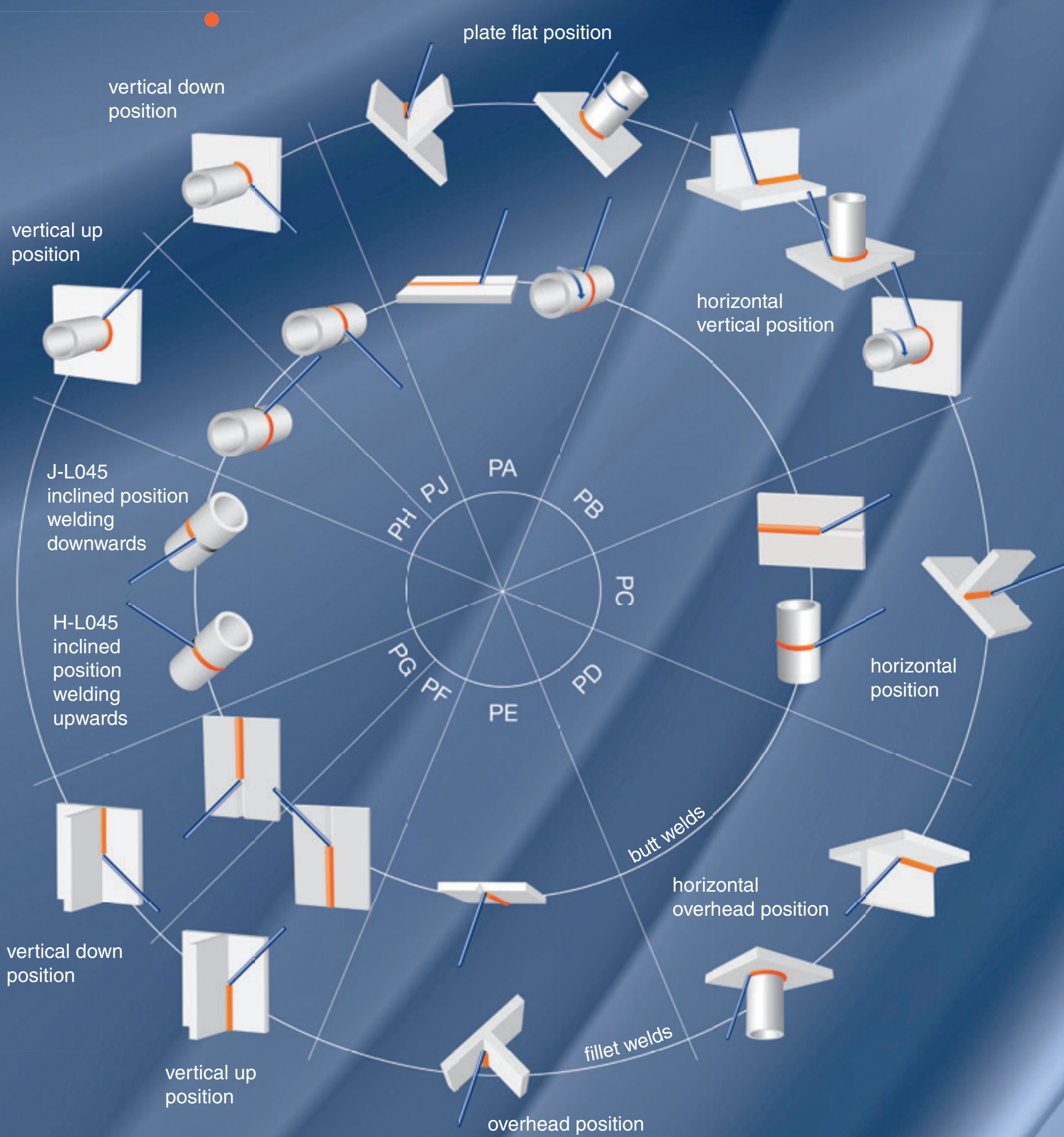
### welding positions

according to EN ISO 6947

- PA flat position
- PB horizontal vertical position
- PC horizontal position
- PD horizontal overhead position
- PE overhead position
- PF vertical up position
- PG vertical down position
- H-L045 inclined position welding upwards
- J-L045 inclined position welding downwards
- PH pipe position for welding upwards
- PJ pipe position for welding downwards

### weld details

- BW butt weld
- ss single side welding
- mb material backing
- nb welding with no material backing
- gb gas backing
- fb flux backing
- bs welding from both sides
- ci consumable insert
- FW fillet weld
- sl single layer
- ml multi-layer
- 311 oxyacetylene welding
- lw leftward welding
- rw rightward welding



[www.dvs-ev.de/DVS-Pruefstellen](http://www.dvs-ev.de/DVS-Pruefstellen)

Notified bodies for the welder's qualification test are regulated by European directives, regulations or standards which apply to approved certification personnel or to accreditation according to DIN EN ISO / IEC 17024 for the holding of the welder's qualification test.

