

DIN EN ISO 16834:2025-06 (E)

Welding consumables - Wire electrodes, wires, rods and deposits for gas shielded arc welding of high strength steels - Classification (ISO 16834:2025)

Contents	Page
Foreword.....	iv
Introduction.....	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Classification	2
4.1 General.....	2
4.2 Classification systems.....	2
5 Symbols and requirements	3
5.1 Symbols for the product/process.....	3
5.2 Symbols for strength and elongation properties of all-weld metal.....	3
5.2.1 Classification by yield strength and 47 J impact energy – System A.....	3
5.2.2 Classification by tensile strength and 27 J impact energy – System B.....	3
5.3 Symbol for impact properties of all-weld metal.....	3
5.3.1 Classification by yield strength and 47 J impact energy – System A.....	3
5.3.2 Classification by tensile strength and 27 J impact energy – System B.....	4
5.4 Symbol for shielding gas.....	4
5.5 Symbol for the chemical composition of wire electrodes, wires and rods.....	5
5.6 Symbol for condition of post-weld heat treatment.....	5
5.6.1 Classification by yield strength and 47 J impact energy – System A.....	5
5.6.2 Classification by tensile strength and 27 J impact energy – System B.....	5
6 Mechanical tests	10
7 Preheating and interpass temperatures	10
8 Welding conditions and pass sequence	10
8.1 General.....	10
8.2 Post-weld heat-treated condition.....	11
8.2.1 Classification by yield strength and 47 J impact energy – System A.....	11
8.2.2 Classification by tensile strength and 27 J impact energy – System B.....	11
9 Chemical analysis	11
10 Rounding procedure	11
11 Retest	12
12 Technical delivery conditions	12
13 Examples of designation	12
13.1 General.....	12
13.2 Example 1 – Classification by yield strength and 47 J impact energy – System A.....	12
13.3 Example 2 – Classification by tensile strength and 27 J impact energy – System B.....	13
13.4 Example 3 – Classification by yield strength and 47 J impact energy – System A.....	13
13.5 Example 4 – Classification by tensile strength and 27 J impact energy – System B.....	13
13.6 Example 5 – Classification by yield strength and 47 J impact energy – System A.....	14
13.7 Example 6 – Classification by tensile strength and 27 J impact energy – System B.....	14
Annex A (informative) Description of composition designations for electrodes in the classification system based upon tensile strength and average impact energy of 27 J – System B	16
Bibliography	17