

# ISO 15609-1:2019-08 (E)

## Specification and qualification of welding procedures for metallic materials - Welding procedure specification - Part 1: Arc welding

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>1</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>1</b>
<b>4</b>	<b>Technical content of welding procedure specification (WPS) .....</b>	<b>2</b>
4.1	General .....	2
4.2	Related to the manufacturer .....	2
4.3	Related to the parent material .....	2
4.3.1	Parent material type .....	2
4.3.2	Material dimensions .....	2
4.4	Common to all welding procedures .....	2
4.4.1	Welding process .....	2
4.4.2	Joint design .....	2
4.4.3	Welding position .....	2
4.4.4	Joint preparation .....	3
4.4.5	Welding technique .....	3
4.4.6	Back gouging .....	3
4.4.7	Backing .....	3
4.4.8	Welding consumables .....	3
4.4.9	Electrical parameters .....	3
4.4.10	Mechanized and automatic welding .....	3
4.4.11	Preheating temperature .....	4
4.4.12	Interpass temperature .....	4
4.4.13	Preheat maintenance temperature .....	4
4.4.14	Postheating for hydrogen release .....	4
4.4.15	Post-weld heat treatment .....	4
4.4.16	Shielding gas .....	4
4.4.17	Heat input / Arc energy .....	4
4.5	Specific to a group of welding processes .....	4
4.5.1	Process 11 (Manual metal arc welding) .....	4
4.5.2	Process 12 (Submerged arc welding) .....	4
4.5.3	Process 13 (Gas-shielded metal arc welding) .....	5
4.5.4	Process 14 (Gas-shielded welding with non-consumable electrode) .....	5
4.5.5	Process 15 (Plasma arc welding) .....	5
Annex A (informative)	Welding Procedure Specification (WPS) .....	6
Bibliography .....		7