

ISO 21452:2025-03 (E)

Specification and requirements of thermal spray coatings for power plant boiler tubes

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Recommended thermal spray coating materials for boiler tubes	2
5	Preparation of thermal spray coatings for variable boiler tubes	2
5.1	Pre-treatment of variable boiler tubes	2
5.2	Thermal spraying	3
5.3	Post-process of thermal sprayed coatings	3
6	Coating quality and performance evaluation	4
6.1	Coating quality	4
6.2	Performance evaluation of coatings	4
6.2.1	Microhardness	4
6.2.2	Bonding strength	4
6.2.3	Porosity	5
6.2.4	Thermal conductivity	5
6.2.5	High-temperature corrosion test	5
6.2.6	High-temperature erosion wear test	7
Annex A (informative)	An example of thermogravimetric plot as a function of the number of hot corrosion cycles	9
Bibliography		11