
**Determination of resistance to
intergranular corrosion of stainless
steels —**

**Part 3:
Corrosion test for low-Cr ferritic
stainless steels**

*Détermination de la résistance à la corrosion intergranulaire des
aciers inoxydables —*

*Partie 3: Essai de corrosion pour les aciers inoxydables ferritiques à
faible teneur en chrome*

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Foreword

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A list of all parts in the ISO 3651 series can be found on the ISO website.

Introduction

The term “intergranular corrosion test” denotes the corrosion test carried out by means of preferential attack of the grain boundaries.

The low-Cr [less than 16 % Cr, less than 0,3 % Ni, less than 0,3 % Ti and less than 0,3 % Nb, less than 0,3 % (Ti + Atomic weight ratio Nb)] ferritic stainless steels may be subject to such attack when they have been exposed to a temperature between about 500 °C to 1 300 °C. This heat cycle, which may provoke sensitization to intergranular corrosion, may occur during rolling or welding operation.

Low-Cr ferritic stainless steels may show high risks to uniform corrosion rates and copper deposit when tested by the methods given by ISO 3651-1 and ISO 3651-2 since the electrochemical potential difference between the matrix and the Cr depletion for low-Cr ferritic stainless steels is much less than that of medium-Cr ferritic stainless steels. These risks should be considered in selecting this test method. Application of this standard test to the other stainless steels out of the above specifications should be made based on the specific agreement between the interested parties.

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