

EDS

Engineering,
GM DAEWOO Auto & Technology
Standards

FERRO TEST METHOD

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1. PURPOSE

This standard aims at specifying the method of checking conditions of coating on bare steel sheet surface that has passed through the pre-treatment process in the paint shop and describe specifically how to evaluate the coating condition based on presence and quantity of blue spots, which are created as a result of reaction between ferro solution and steel.

2. SCOPE

All steel sheet whose bare surface is composed of Fe.

※ Bare surfaces of MG(Zn-Ni) steel sheet and organic coated steel are made not of Fe but of Zn-Ni and organic resin and no reaction takes place between their surface and ferro solution. As a consequence, their coating conditions cannot be identified with this test.

3. TEST APPARATUS AND REAGENT

3.1. Reagent : Ferro solution

3.2. Test apparatus: stop watch, pincette, filtering paper (Ø: 5.6 cm), petri dish

4. TEST PIECE CONDITION & REAGENT PREPARATION

4.1. Test piece preparation

4.1.1. Chemically treated test piece that has passed through degreasing → washing → surface control → chemical processes in the paint shop pre-treatment line

4.1.2. The test piece is constructed based on the actual body door outer panel.

4.2. Reagent preparation

4.2.1. $K_3Fe(CN)_6$: 3g

4.2.2. NaCl: 4g

4.2.3. FON(surface active agent): 0.7g

4.2.4. Mix the above and D.I. water to make test solution of 100g.

5. TEST PROCEDURES

5.1. Prepare a chemically treated test piece that has passed through the paint shop pre-treatment line.

5.2. Fill the petri dish with an adequate amount of ferro solution to sufficiently wet the filtering paper.

5.3. Sufficiently wet the filtering paper with ferro solution.