



EDS-T-7176

VERSION: 2

1. PURPOSE

This standard aims at determining quantity of carbon contamination on cold rolled steel sheet surface.

2. APPARATUS

2.1. Power washer ~ A long tank with nozzles at both ends and a pump at the tank bottom, which re-circulates solution through spray nozzles with specified pressure. It shall met the following:

2.1.1. Nozzle pressure : 62 ~ 76 Kpa

2.1.2. Nozzle length from test panel : 15 ~ 20 Cm

2.1.3. No. of nozzles : At least 12 nozzles shall be provided at both ends, which are preferably to be distributed throughout the entire test piece. Distance between nozzles shall be 15cm.

2.1.4. Nozzle type : FULL JET No. 6.5 (manufactured by SPRAYING SYSTEM Co., Weaton, IL) or its equivalent
(Note 1) Details of the typical power washer system (DWG NO. STD 7048) can be obtained from the Parker Division of Oxy Metal Industries Corporation, Madison Heights, MI.

2.2. Rubber gloves ~ to prepare against harmful acid

2.3. Filtering paper ~ 934 AH class, 5.5Cm - Whatman, Inc. or its equivalent

2.4. Hydrochloric acid ~ reagent

2.5. Porcelain crucible ~ 5 ml COORS No. 23003 - VER Scientific; Curtin Mathheson Scientific, or its equivalent

2.6. Furnace ~ Re-circulating furnace capable of keeping temperature of 260 ~ 280 °C

2.7. Carbon analyzer ~ Leco CS 244 or its equivalent (For improved accuracy, equipment using an infrared detector is recommended.)

(Note 2) To avoid damage of the instrument panel, a proper acid collecting device shall be provided inside the equipment. For information on each equipment, refer to the supplier of the equipment.

2.8. Vapor degreaser (for method B) ~ Philips manufacturing co., DETROIT, MI T48E or its equivalent

3. TEST CONDITIONS

Unless specified otherwise, all test values described here shall be based on materials controlled to temperature of $23 \pm 2^{\circ}\text{C}$ and relative humidity of $50 \pm 5\%$ for min. 24 hours before test.

4. TEST PROCEDURES

4.1. Method A - power washer method