INTRODUCTION

AUFHAUSER E70S-6 contains high levels of manganese and silicon for stronger deoxidizing power where stringent cleaning procedures are not possible. The E70S-6 is intended for both single- and multiple-pass welding. This wire has been designed to provide X-ray quality porosity-free welds and the highest tensile strength (as welded) of the plain carbon steel wires. The high silicon content increases the fluidity of the weld pool, creating a smoother bead appearance and resulting in minimal post-weld grinding. AUFHAUSER 70S-6 is excellent where poor fit-ups or rusty and oily plates may be used. It is especially suited for sheet metal applications. These electrodes withstand high currents with CO₂ shielding, even when welding rimmed steels.

APPLICATIONS

- Welding steels with dirty or rusty surface
  (UNS numbers K02600, K02801, K02001, K02700)
- Single-pass welding of killed, semi-killed, and rimmed steels, but may be used for some multi-pass applications.

CHEMICAL COMPOSITION

(AWS A5.18, Typical)

<table>
<thead>
<tr>
<th>Element</th>
<th>Nominal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>.11</td>
</tr>
<tr>
<td>Manganese</td>
<td>1.64</td>
</tr>
<tr>
<td>Silicon</td>
<td>.86</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>.013</td>
</tr>
<tr>
<td>Sulfur</td>
<td>.010</td>
</tr>
</tbody>
</table>

Note: All values are maximum percentage, unless shown in range.

PHYSICAL and MECHANICAL PROPERTIES

- Tensile Strength: 81,000 psi
- Yield: 67,900
- Elongation, min. %: 29
- Average Impact Strength %: 29

SPECIFICATIONS MEET or EXCEED

- ANSI/AWS A5.18 (ER 70S6)

STANDARD SIZES AND DIAMETERS

Diameters
- 0.23”, 0.30”, 0.35”, 0.45”

Properties were determined with 100% CO₂ shielding gas.