



## Indian Standard IS 5206: 1983 Specification for Covered Electrodes for Manual Metal Arc Welding of Stainless Steel and Other Similar High Alloy Steels

**Covered electrodes for Manual Metal Arc (MMA) welding** are used to join **stainless steels** and other **high-alloy steels**. These electrodes consist of a **core wire** and a **coating** that provides shielding gas, forms slag, and performs other functions to ensure a **stable arc** and **high-quality welds**. The coating is specifically designed to **protect the molten metal** from contamination by atmospheric gases such as oxygen and nitrogen. Electrodes intended for welding stainless and high-alloy steels are formulated to create **strong, corrosion-resistant welds**, which are essential for applications that require resistance to heat, pressure, and harsh environments.

Covered electrodes for welding **stainless steel** and **high-alloy steels** must meet several key quality parameters. These include the ability to produce **strong, durable welds** that are free from **defects** like **cracks, porosity, and undercuts**. The weld should also offer **enhanced corrosion resistance**, especially in high-temperature or harsh environments. Additionally, the electrodes should provide **ease of use**, with **stable arc performance** and **minimal** spatter. The slag formed during welding should be easy to remove, and the electrodes must be compatible with standard equipment for use in various welding positions. Storage stability is also crucial, as electrodes must retain their effectiveness even in humid conditions.

**IS 5206:1983** addresses these customer requirements by specifying the core wire and coating composition to ensure that electrodes produce welds with the required **strength** and **corrosion resistance**. The standard provides guidelines for coating characteristics, ensuring **stable arc maintenance**, reduced spatter, and easy slag removal. It also outlines **optimal welding** parameters for different positions and applications, ensuring versatility and ease of use.

Furthermore, IS 5206:1983 ensures that electrodes maintain performance over time by specifying requirements for **moisture resistance** and **packaging**, which protect them during storage. The standard ensures that welds made with these electrodes will meet visual inspection standards and be free from common welding defects, ensuring that manufacturers meet customer expectations for **high-quality, reliable performance** in **demanding applications**.