Classification of Insulating Coating for Electrical Steel	
C0	An insulation consisting of the natural oxide film formed during mill processing. This thin coating will withstand normal annealing temperatures and oxided surface condition may be enhanced by annealing furnace atmosphere.
C2	An inorganic insulation coating that consists of a glass-like film which forms during high-temperature hydrogen anneal of grain oriented silicon steel as a result of the reaction of an applied coating of magnesium oxide and silicates in the surface of the steel. This coating is abrasive and can withstand normal stress relief annealing.
C3	An organic enamel or varnish coating that is applied over the steel's natural oxide surface. It provides very high levels of surface insulation resistance as well as protection against rusting. It also can increase die life by providing lubrication during the stamping process. While suitable at normal operating temperatures of electrical devices, it will not withstand the heat of stress relief annealing.
C3A	The same as C3 but with a thinner coating thickness to facilitate welding of rotors/stators and minimize welding residue.
C4	An inorganic coating that is produced by a special chemical and thermal processing of the steel surface. It is best for punched laminations where only a moderate degree of surface insulation and increased die life are desired. This coating is not harmed by standard stress relief annealing temperatures, retaining adequate surface insulation characteristics.
C4A	The same as C4 but with a thinner coating thickness to facilitate welding of rotors/stators and minimize welding residue.
C4AS	This anti-stick surface treatment provides protection against lamination sticking during the annealing process of semi-processed steels.
C5	This is a high-resistance insulation formed by a chemical treatment similar to that of C4 but with the addition of an inorganic filler to enhance its electrical resistance. It will withstand stress relief annealing if temperatures do not exceed 1500 degrees F (815 degrees C) and a neutral or slightly reduced atmosphere is used.
C5A	The same coating as C5 but with a thinner coating thickness to facilitate welding of rotors/stators and minimize welding residue.
C5AS	A C5 type coating used primarily for preventing sticking of semi-processed non-oriented electrical steel and cold-rolled motor lamination steel during quality anneals. It also could facilitate welding of rotors/stators and minimize welding residue.
C6	This is an organic based coating with inorganic fillers added to improve insulation qualities. It is typically used for fully processed non-oriented steels. The coating improves the punchability of steel.