CONTINUOUSLY TRANSPOSED CABLE
Decisive advantage in transformer technology
Continuously Transposed Cable (CTC) consists of a number of rectangular, film insulated conductors made into an assembly and usually over-wrapped with layers of insulating paper. Continuously Transposed Cable are primarily used in power and traction transformers. CTC offers significant advantages in the design of transformers compared to transformer windings with conventional paper-insulated conductors.

The Superior Essex production globally ranges from 5 to 84 strands. The width of strands varies from 2.8 to 12.5 mm (0.110" - 0.492") and the thickness from 0.8 to 3.15 mm (.032" - 0.124").

Conductors are made from high conductivity electrolytic copper, from either soft-annealed or work hardened copper. For special requirements, silver-alloyed copper or aluminium can also be used as conductor material.

SUPERIOR ESSEX, 45 YEARS OF EXPERTISE IN CTC

Since 1963 Superior Essex has been a key supplier to the transformer industry. Today, with a global production capacity of more than 28000 metric tons, 14 CTC lines, and a wide variety of product constructions Superior Essex is a key partner to the transformer industry. Nuclear Power plants, Turbo Hydro power plant stations and installation of HVDC lines are examples of projects where the expertise of Superior Essex is chosen by the global companies specializing in transformers production.

SUPERIOR ESSEX, A GLOBAL LEADER IN CTC

Superior Essex is the largest producer of CTC worldwide. With four manufacturing facilities on three different continents Superior Essex is able to assist our customers with any technical or application requirements. Our sales and engineering teams are dedicated to supporting our customers on a global and regional level.

Since this product and this market require specialists, locally dedicated technical and sales teams in America, Europe and China are managing the projects of Superior Essex customers for CTC.
With 45 years of expertise in CTC Superior Essex offers a wide range of conductors, strand insulation, insulation materials and assembled CTC.

Epoxy-bonded transposed cable
The strand insulation can be over-coated with bondable epoxy. These epoxy resins cure under the same thermal conditions applied to the cellulose components in the drying process of the winding. Epoxy bonded transposed cable are characterised by very high mechanical strength, which enables the winding to withstand high electro-dynamic forces, e.g. in the event of short circuit.

For low voltages windings Superior Essex developed many patented solutions without conventional paper insulation. These new types of continuously transposed Cable offer significant advantages:
• No bulging of paper insulation, thus oil pockets are avoided.
• Improved heat dissipation allows reduction of oil ducts and results in better space factor.

Cordex®
Cordex® CTC is a special transposed cable without paper insulation. It is wrapped with a transformer oil resistant polyester monofilament. Different types of Cordex are available: Cordex only with protection paper. Cordex 1 with 2 layers papers at the bottom in radial dimension, Cordex 2 with two layers paper in axial dimension, Cordex 3, a cordex 1 plus aramide paper at the bottom in radial dimension for easy winding. Cordex CTC is supplied with a protection paper, which will be removed prior to the winding process.

Diamond wrap
This covering currently consists of two opposing wraps of aramide paper arranged to allow free oil flow through the CTC strands for cooling purposes. A linear protection crepe paper is normally inserted on the underside of the cable.

Perforated paper
This product gives excellent heat dissipation and is suitable for epoxy application, with radial or concentric Bond. The cable is wrapped with perforated aramide paper. Perforated CTC is delivered without protection paper.

Paperless CTC
The patented Essex transposing technology allows the production of Continuously transposed cable without any covering. This product allows the smallest dimension of transformer windings. It is also supplied with a protection paper.

For more technical information or for special purpose, please contact Superior Essex technical of sales department. More details can also be found on our website www.superioressex.com.