

**THEVA TO DELIVER 5 KM OF COATED CONDUCTOR FOR MOTOR PROJECT**

THEVA has just been selected by a German consortium to supply about 5 km of coated conductor tape for a new generation of compact, powerful linear motors. The motors are designed and built by the German OSWALD Elektromotoren GmbH within a project funded by the German Minister of Education and Research. This deal constitutes the largest volume of coated conductors ordered up to the present.

The 2G HTS wire based on Hastelloy C 276 metal substrate will be fabricated by THEVA's proprietary inclined substrate deposition technique (ISD) and e-gun evaporation of the superconductor layer. This technique has been developed over the last seven years as an alternative to the widely used RABiTS<sup>®</sup> (rolling assisted bi-axial textured substrate) or IBAD (ion beam assisted deposition) technologies. Coated conductors manufactured in this way exhibit critical current densities up to 2.5 MA/cm<sup>2</sup> and in 10 m long tape THEVA realized 200 A of transport current from end to end.

The CC tape will be utilized for two prototypes of a new generation of powerful industrial linear motors, which will set new benchmarks in terms of dynamics and power density. The smaller motor will consist of 18 double pancake coils using 30 m tape length each, the bigger one of 30 coils of 135 m tape length each – making up a total of nearly 5 km of CC tape. The material has to be delivered until begin of 2007, i.e. within the next one and a half years. The order uses about half of THEVA's production capacity.

According to Werner Prusseit, CEO of THEVA, "this project is an important stepping-stone in bringing second-generation superconductor wire to the market. We are pleased to see that the inherent potential of the new material has been recognized by a medium - sized engineering company. Teaming up with an experienced system manufacturer like OSWALD provides the unique opportunity to optimize our material for the rugged conditions of a real-world application. Even if this order is - without question - extremely challenging we are confident to deliver the material within the given timeframe with the required specs."

**About Oswald Elektromotoren GmbH**

OSWALD Elektromotoren GmbH is a medium size, high tech motor manufacturer located at Miltenberg in the northwest of Bavaria. The privately owned company was founded in 1909 and has 100 employees. OSWALD is specialized in custom designed electro – motors and solenoid magnets. The motors are used for a variety of applications ranging from machines for textile industry, for transportation and conveying, printing, milling, and wire drawing to engines for automotive test rigs.

**About THEVA Dünnschichttechnik GmbH**

THEVA is the world's leading manufacturer of HTS coatings. Founded in 1996 as a spin off of the Technical University of Munich, the company is privately owned and located on the outskirts of Munich, Germany. Since 1998 THEVA has been developing a proprietary CC process technology, which is currently transferred and utilized for prototype CC production.

**LARGEST CC ORDER UP TO THE PRESENT**

**LINEAR MOTORS WILL SET NEW BENCHMARKS IN TERMS OF DYNAMICS AND POWER DENSITY**