Coil Innovation at a glance

Coil Innovation specialises in the design, manufacture and sales of air-core dry-type reactors for electric power transmission and distribution systems as well as for electric power systems of electrical plants.

The company was founded in July 2004 as a private limited company (GmbH) by a team with a wealth of experience in this branch of business and a high degree of product knowledge. This team, made up of three persons, is forming the operational core team of Coil Innovation, headed by Alex Grisenti, who has assumed the position of the managing director. He brought in 29 years of experience in the field of air-core dry-type power reactors. Each of the two other partners, Josef Eder and Johann Mülleder, disposes of more than 10 years of experience in the air-core reactor business.

The operational core team of the company is holding the majority of the shares. It is supported by a young, motivated and highly-qualified team of employees. The rest of the shares are held by two strategic partners, which are suppliers to Coil Innovation GmbH. One of the strategic partners is the Haase Company in Graz/Austria, providing the aluminium conductor material for the manufacture of air-core dry-type reactor windings.

For the manufacture of power inductors, modern production facilities, were built in Eferding, in the heart of Upper-Austria. The production started in May 2005. In the meantime these facilities have been extended several times and are now consisting of approximately 5000 m² of production area and 1000 m² of office area.
Within less than 6 years of operation **Coil Innovation received orders representing a total reactive power of more than 20.000 MVAR.** The majority of these orders are SVC reactors for industrial and utility application as well as reactors for HVDC transmission. Coil Innovation also supplied fixed shunt reactors, filter reactors, current limiting and low flow reactors, tapped series reactors for electric arc furnaces as well as DC smoothing reactors.

Coil Innovation succeeded to successfully enter all major air-core reactor application segments for markets around the world and supplied air-core reactors to destinations in Europe, Asia, North and South America as well as Africa and Australia.

Major utilities around the world are employing Coil Innovation reactors in their transmission systems, just to mention some of them: E.ON (Germany), N-ERGIE (Germany), RTE (France), Statnett (Norway), Tennet (Netherlands), REN (Portugal), SEC (Saudi Arabia), Duke Energy (USA), Pacific Gas & Elelectric (USA), LFC (Mexico), CFE (Mexico), Transelec (Chile), Western Power (Australia), ESKOM (South Africa).

Amongst others Coil Innovation received the contract for the supply of all reactors for **3 SVC substations of the Saudi Electricity Company (SEC)** for dynamic reactive compensation in the Western region of SEC's transmission grid (Jeddah SVC Project).

Another important and prestigious project Coil Innovation has been awarded is the supply of the **AC filter reactors for the NorNed HVDC project.** This is the world's longest sea cable and HVDC interconnection (580 km), which will be utilised to couple the Dutch and Nordic electric energy markets in Europe.
Innovation and quality are the key elements of the strategic alignment of Coil Innovation. Since starting up production Coil Innovation has gained increasing recognition on the international market. Many clients, having visited the ultra-modern reactor production facilities in Eferding, were able to convince themselves of the high level of innovation and quality in design and production of air-core dry-type reactors and already attest Coil Innovation the technological market leadership.

This refers to the advanced reactor design process utilising as 3D-CAD software with a specially developed "Coil Configurator" as well as to the modern winding production technology employing an integrated online-conductor-processing. By Coil Innovation's patented winding production technology, which disposes of an adaptive control system linking the winding machine and the conductor processing unit, a high compactness and dimensional accuracy of the winding is achieved. Thus manufacturing tolerances are respected and essentially eliminated.

The limits of Coil Innovation's production facilities with regard to the maximum physical air-core reactor dimensions are windings with a diameter of 4 m, a height of 4 m and a weight of 30 tons per single unit.

The ever growing demand for electrical equipment with extremely low sound emissions has prompted Coil Innovation to make significant investments into the development of low-noise reactors and modern acoustic measurement tools. This investment yielded two major accomplishments – a revolutionary sound mitigation technology, for which Coil Innovation has received a patent, and a new sound measurement test laboratory. This test facility enables Coil Innovation to simulate operational loads on reactors in a specially-developed acoustic laboratory using powerful harmonic current sources, and thereby perform reliable acoustic measurements.

In addition Coil Innovation disposes of a modern high voltage test laboratory, which is – among other things - equipped with the following testing facilities:
• Impulse voltage test system (impulse voltages up to 1700 kV)
• AC high voltage test system (AC test voltages up to 400 kV)
• Test system to perform AC load tests (up to 4000 A), consisting of a transformer aggregate, a capacitor bank to generate reactive power (up to 40 MVAr) and precision instrument transformers
• Test system to perform DC load tests (up to 5000 A), consisting of a transformer aggregate, a rectifier and precision current shunts (current viewing resistors)
• Fibre optic temperature measurement system for heat run tests on reactors
• Programmable AC power source, high precision watt meter and high precision micro-ohmmeter

Coil Innovation has established an integrated management system comprising the aspects of quality, environment, health and safety. This management system has been certified according to:
• ISO 9001: 2008 Quality Management System
• ISO 14001: 2004 Environmental Management System and
• OHSAS 18000: 2007 Safety Management System; see attached certificates.

Eferding, May 1, 2011

Attachments:
ISO 9001: 2008 Quality Management System, Registration Number AT-05403/0
ISO 14001: 2004 Environmental Management System, Registration Number AT-00718/0
OHSAS 18000: 2007 Safety Management System, Registration Number AT-00158/0