

Magnets for PSI XFEL project

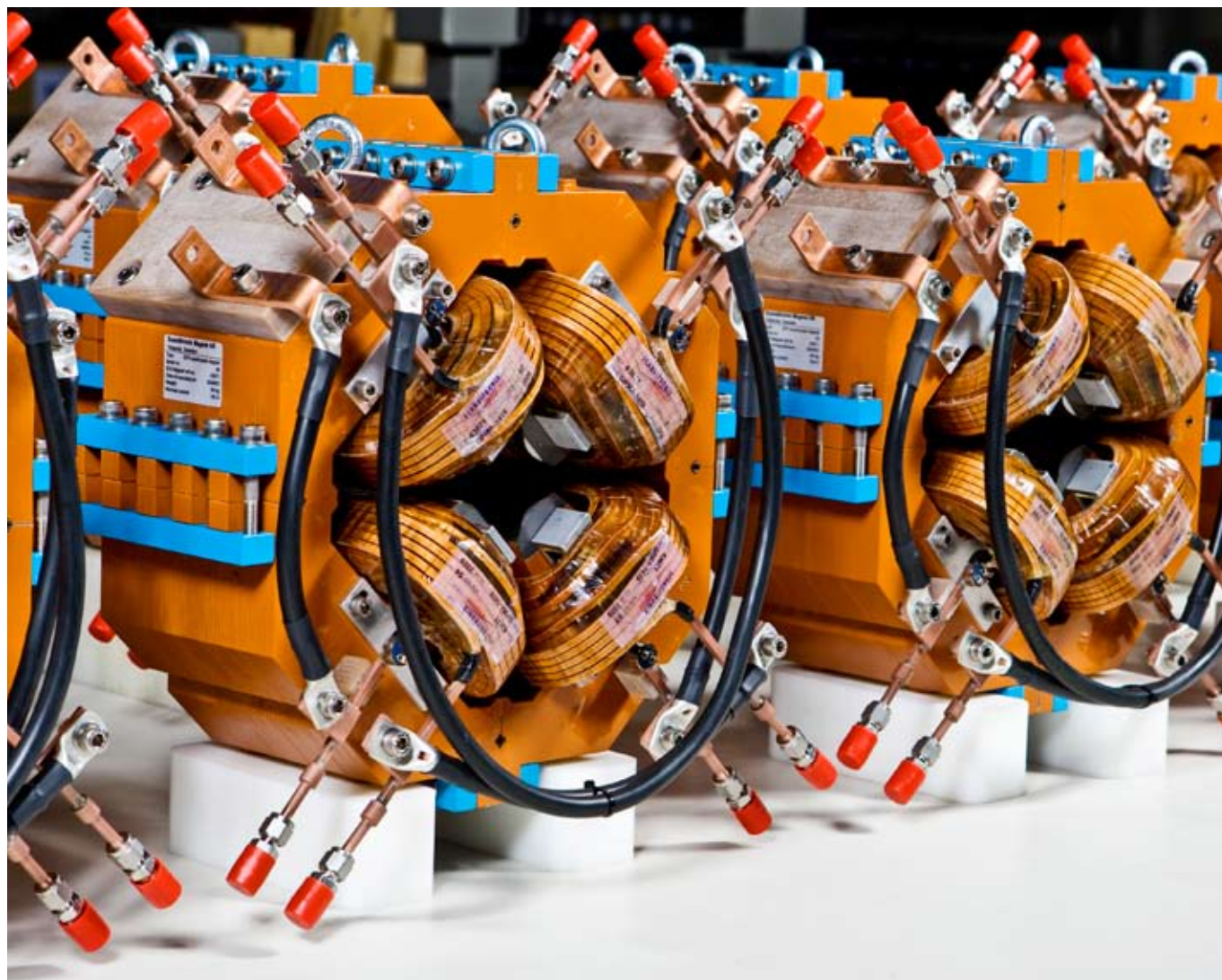
The X-ray Free Electron Laser (PSI-XFEL) is a new development in laser and accelerator technology at Paul Scherrer Institute (PSI) in Switzerland. Currently, the first stage of this project, the 250 MeV injector, is under construction. For this first stage, Scanditronix Magnet has delivered 28 quadrupole magnets and 28 steering magnets. The magnets were manufactured in accordance with

drawings prepared by the PSI magnet section. The steering magnets have solid low carbon steel yokes and air convection cooled coils. The quadrupole magnets have laminated yokes and water cooled hollow conductor coils.

Over the years Scanditronix Magnet has been involved in several projects for PSI. We are also currently manufacturing solenoid coils for the 250 MeV injector.



SFC steering magnet



QFA quadrupole magnet

2008 was another successful year for Scanditronix Magnet. We are particularly pleased to see our old customers continuing to place orders with us. One of the prime reasons for this is our indisputable value of always delivering good quality and to always making certain that we meet our customers' needs. Our efforts to streamline our processes in order to increase cost effectiveness is also a major contributory factor.

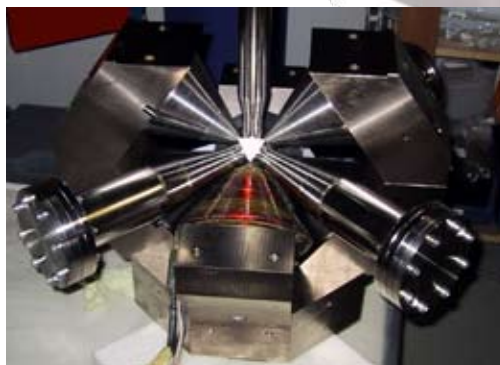
Despite the global financial situation we feel confident for 2009 and we plan to continue our expansion in the field of magnets for accelerator application.

Mikael Vieweg
President



3D vector magnets for material physics

For the accelerator and magnet technology company AMACC AB, Scanditronix Magnet has manufactured many different laboratory magnets over the years. In 2009, a 3D vector magnet has been delivered to AMACC for Forschungszentrum Dresden-Rossendorf in Germany. The magnet will be used for MOKE (Magneto Optic Kerr Effect) measurements.



Above: 3D vector magnet for Forschungszentrum Dresden-Rossendorf.

Left: Part of an eight pole 0.92T magnet, showing the vacuum chamber.

New ERP system

As a step in our efforts to streamline our processes a new ERP (Enterprise Resource Planning) system has been acquired. The system we have chosen is a popular system used by industrial companies, mainly in Sweden but also globally. The implementation of this system will lead to improved efficiency for all administrative parts of our business, giving us more time to focus on the core activities.



Several deliveries for industrial accelerators

Scanditronix Magnet is manufacturing a number of magnets and coils for use in the IBA Rhodotron® electron accelerator system. The Rhodotron accelerator can deliver a high beam current accuracy at both high and low currents, which makes it very suitable for industrial irradiation purposes.

The facilities are used for medical device sterilization, irradiation of material and food and for several other applications. Scanditronix Magnet is proud to have been selected as a supplier for these industrially operated machines.



IBA Rhodotron (Courtesy IBA).



The Fusion 1.8 m range FaroArm. Courtesy 3D Scanners AB

New FaroArm for quality control

Scanditronix Magnet has recently invested in a FaroArm – the Fusion model with 1.8 m range. The fusion 1.8 m FaroArm has a single point accuracy of ± 0.036 mm, which is approximately 10 times larger than for a traditional three axis CMM (Coordinate Measuring Machine). The FaroArm is therefore not used as a replacement to the normal 3D CMM, but as a compliment.

The FaroArm is used as a cost-effective replacement of standard hand held measurement tools, such as, callipers or gauge blocks. It also opens up many new possibilities for quality control directly on the workshop floor in the different production processes utilised by the company.

GANIL

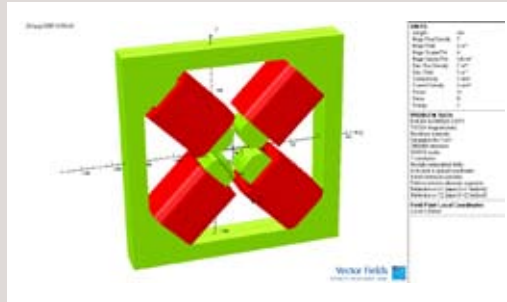
We are pleased to welcome the French laboratory GANIL (le Grand Accélérateur National d'Ions Lourds) as a new customer. Before the summer we will be delivering spare coils for a spec-

trometer magnet. The coils are wound with no internal joints, using our special glass taping machine which has been designed and built in-house.



What we offer

- Magnetic design
- Mechanical design
- Manufacturing
- Assembly
- Quality assurance
- Magnet field measurements



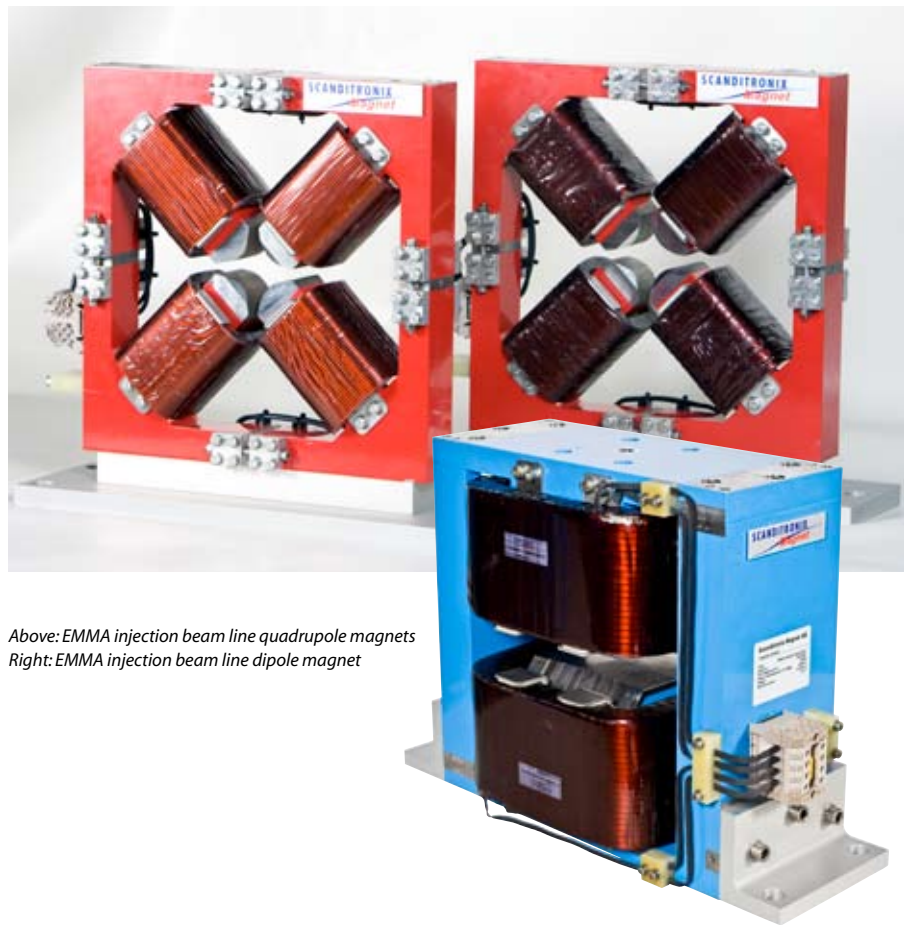
Conferences

Scanditronix Magnet will exhibit at PAC, **Particle Accelerator Conference**, held in Vancouver, Canada, during May 4–8. We look forward to meeting existing and future customers and welcome you all to visit us at our booth, no 26.

Magnets for Daresbury Laboratory EMMA project

At the STFC Daresbury Laboratory in UK, a novel accelerator named EMMA – “Electron Model of Many Applications” is currently being built. EMMA is a non-scaling “fixed field alternating gradient accelerator” (FFAG).

For this project, Scanditronix Magnet has delivered 4 dipole magnets and 13 quadrupole magnets, for installation in the injection beam line. The contract included all stages of design and manufacturing – from 3D magnetic field simulations, performed in-house, using Vector Fields Opera 3D software – to field mapping and rotating coil measurements of all the magnets, in order to verify that the magnetic field tolerances specified by the customer were satisfied. We are also currently manufacturing more magnets, 1 dipole and 8 quadrupoles, for the EMMA diagnostics beam line.



Above: EMMA injection beam line quadrupole magnets
Right: EMMA injection beam line dipole magnet

SCANDITRONIX
Magnet

Scanditronix Magnet AB
Olvägen 28,
SE-342 50 Vislanda, Sweden

Phone: +46 472 486 80
Fax: +46 472 486 89

E-mail: sales@scxmagnet.se
www.scanditronix-magnet.se