

Reference report

tde provides cable system for research centre CERN



CERN is the worldwide largest and most advanced research centre for particle physics. In recent years, a high tech communication network has been established for the transportation of measured data in the research centre located in the Canton of Genf. The high data transmission rate of 1TB/s required the installation of a customised fibre optic infrastructure. tde-trans data elektronik GmbH situated in Germany provided the biggest part of the fibre optic connection technology and therewith significantly contributed to an impeccable operation of the particle accelerator.

The research centre had to search for two years to find a suitable partner for the installation of the communication network as extensive competence was required to comply with the demanding CERN functional specification document. Luit Koert de Jonge, CERN project manager at that time, applied an important selection criterion: "For the technical network, CERN wanted to install a pipe system capable of having extremely thin fibre optics induced and easily allowing expansion as well as updates. After CERN had compared numerous providers, the proficient tde-trans data elektronik GmbH was awarded the contract for the completion and the patch cables, which con-

stituted the infrastructure's highest matter of expense. The Dutch company Draka Comteq Telecom assumed the development of the micro pipe system for the optical fibre. "tde received the contract, because we can offer almost the whole range of optic fibre technology combined with the latest plug-in connectors," explains André Engel, tde – trans data elektronik GmbH manager.

In order to achieve best insertion loss and reflux values tde considerably invested in new techniques and steadily optimised the production processes. Over the last few years tde has continuously provided the particle accelerator with customised products, which partly were produced under enormous time pressure.

The positive side effect: tde applied the knowledge gained during the CERN project immediately to their own patented modular cable system tML[®].