

NEUTRON GUIDES AND SCIENTIFIC NEUTRON EQUIPMENT AT CILAS / GMI

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ABSTRACT

The French company CILAS is the world's leading supplier of complete neutron guides systems. The neutron optics with multilayer coatings produced by CILAS has become an international standard for neutron beam transportation at modern research institutes.

During the last 30 years, CILAS designed, produced and installed more than 5000 meters of guides in many European, American and Asian countries.

By these projects the company has acquired a very strong experience with: conception, design, manufacturing, setting up of Neutron Guides.

In most cases, CILAS was in charge of the design, as well as the manufacturing of the **whole system**, comprising optical and mechanical components, vacuum system, shutter and shielding definition. By our long experience we have also acquired good knowledge of the materials used in this specific nuclear environment and their behavior under radiation such as glass, borated or not, coatings, glue or metal.

To reinforce its leadership and presence in neutron research, CILAS acquired the company Grenoble Modular Instruments (GMI) a leading company in high precision mechanics, engineering and manufacturing of spectrometers and scientific equipment for neutron and synchrotron research.

This merger allows us to design and to supply a complete range of high precision **optical and mechanical** equipment for neutron research. CILAS and GMI have designed, manufactured and installed a High Resolution Powder Diffractometer for the 30MW Korean Hanaro Reactor. This project included the calculation, design and supply of the complete biological shielding of the instrument as well as for the primary beam shutter on the thermal beamport.