

TECHNOLOGY & LOGISTICS CENTRE TLZ

TECHNICAL IMPLEMENTATION OF SCIENTIFIC QUESTIONS



OLAF PFANNKUCHE UND RALF SCHWARZ

Most of the GEOMAR research proposals are related to a sea going expedition, which requires technical support in instrument handling on board of national and international research vessels all over the world. Consequently, the modern, complex and sensible equipment needs a dedicated service prior and after cruises. In addition, in-house development of new sensor and measurement technology requires a skilled and well trained staff of technicians and engineers. All fields of mechanical and electronic engineering need to be covered as well as computing support for the systems internal "intelligence".



Instrument preparation hall (900m²) with 3,5t gantry

Within the building a large staging hall with mobile lifting capacity, and the ability to load/unload containers and trucks, allows the in-house preparation of present and future marine expeditions. Specialized laboratories for delicate and high precision tasks form another TLZ core-element. Among these there is a calibration facility for accurate temperature and pressure calibrations, a laboratory for servicing the GEOMAR CTD's, a Video Lab and a set of pressure tanks used for a wide range of applications. Finally, there are a several laboratories allocated to the specific needs of the research Divisions

The institute provides a suite of deep sea vehicles i. e. the work-class ROVs *Kiel 6000* (6.000 m diving depth) and *Phoca* (3.000 m diving depth), the manned submersible *JAGO* (400 m diving depth), the AUV *Abyss* (6.000 m rated), a mobile multidisciplinary deep sea observatory *MoLab* (6000m rated), Lander systems, gliders, CTDs, moorings, open ocean mesocosms together with a full range of geophysical equipment (OBS fleet, Airguns, 2-D 3-D multichannel streamer, deep towed sidescan sonar and streamer), water and bottom sampling devices and containerized laboratories complete the instrument park. This diverse fleet of vehicles and platforms is also provided to the national and international community of deep ocean research.



The GEOMAR Technology & Logistic Centre: Main building with workshops (right), gear storage hall (1200m², left), Container range with 9t forklift (foreground)



TLZ: Test tank with AUV "ABYSS"



Core of the TLZ is a central workshop comprising facilities for precision mechanics, locksmithery, joinery (wood and synthetics), and electronic workshops. Besides the maintenance and construction of large seagoing infrastructure the support of the central work shop also includes the design and construction of experimental set ups and smaller equipment for Master and Ph. D. Related projects.

Contact:
Head:
Dr. Olaf Pfannkuche
0431-600 2113 opfannkuche@geomar.de
Technical Head
Ralf Schwarz
0431-600 1600 rschwarz@geomar.de

