VGB TECHNICAL SERVICES &
ENGINEERING CONSULTANCY

SERVICES
- Materials Laboratory
- Water Chemistry
- Oil Laboratory
- Engineering Consultancy
- Supervision of Construction and Installation

VGB TECHNICAL SERVICES

OUR KNOW-HOW – YOUR BENEFIT

Technical services are an integral part of VGB PowerTech’s work. They are to be regarded as an enhancement to the services for our members and cover all aspects of engineering, operation and maintenance in power plants.

The technical services comprise:
- Materials Laboratory
- Water Chemistry
- Oil Laboratory
- Engineering Consultancy
- Supervision of Construction and Installation

Members make use of these services worldwide to achieve sustainably safe, trouble-free and cost-effective operation. We listen to your problems and establish solutions which are notable for their cost-effectiveness and technical expertise.

We are aiming at detecting undesirable influences on a plant at an early stage and at eliminating them or limiting their effects.

MATERIALS LABORATORY &
WATER CHEMISTRY

The VGB Materials Laboratory has over 30 years of experience in the field of damage analysis and condition assessment of power plant components. In addition to that we are active in practically oriented research and development in the field of materials technology. We perform the work both on site with our customers and in our state-of-the-art in-house laboratory.

The following examination methods are available:
- Root cause analysis ➔ Support to eliminate the root cause
- Lifetime assessment ➔ Optimised life cycle management
- Non-destructive testing (UT, MT, DPI, replication)
- Material selection and assessment
- Consultancy in general material questions
- Online creep strain measurement

The Water Chemistry department of Technical Services provides services and consultancy related to water chemistry ranging from water demineralisation, water-steam cycle and to cooling water. We also examine ion-exchange resins and carry out extensive chemical and physical measurements on site.

A broad range of modern measuring methods and techniques are available (e.g. mobile laboratory, oxygen, sodium and hydrogen measuring instruments, measurement of degassed cation conductivity, organic X monitor and silicometer). By means of this available equipment, it is possible not only to conduct regular monitoring of the operation of water treatment systems, the water-steam cycle and district heating water, but also to perform failure analyses.
OIL LABORATORY

All services around oil management are carried out in our state-of-the-art oil laboratory for analysing lube and insulating oils. The oils investigated range from oils used in conventional electricity generation and in plants for renewable energy conversion up to industrial plants of the chemical and steel industry.

Oil examination leads to safe operation and cost optimisation, i.e. the avoidance of unnecessary oil changes results. Sub-inhibition of lubricants is a particular service of VGB oil management, because the addition of inhibitor according to needs often increases lifetime of oils thus avoiding oil changes.

The oil laboratory is dealing with:
- Independent oil analysis in own laboratory
- Assessment of lube and insulating oils
- Tailor-made solutions to extend lube oil lifetime
- Inhibition with additives
- General consulting in oil issues
- Optimisation of lubricant systems
- Support during oil changes
- Certification of oil suppliers

ENGINEERING CONSULTANCY & SUPERVISION OF CONSTRUCTION AND INSTALLATION

Engineering consultancy is provided in close cooperation with the operators and manufacturers.

Consultancy comprises support in:
- Project development and planning
- Project implementation including commissioning
- Tendering
- Damage analysis
- Optimisation of operation

This also includes assessment of the:
- Dimensioning
- Specification
- Workmanship at site

Our experts will meet your expectations and identify practical solutions.

The team “Supervision of Construction and Assembly” is controlling quality within the scope of new built projects, partial renewal and inspections in order to improve plant safety and availability for the benefit of operators. The activities cover all relevant power plant components like e.g. turbine, generator, boiler components and pipe systems.

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