

DMT QHSE

Short Description of the DMT QHSE Management System



DMT QHSE POLICY

DMT management is committed to doing the utmost to protect its personnel and the environment in which we live and work. The enhancement of the Quality of our services, the Health and Safety of our employees, our customers, our contractors and third parties as well as the protection of the Environment are an integral part of our daily operations.

The success of our operations depends on the continuous improvement of our services, the control of hazards and a pro-active approach of all personnel towards a zero defect culture.

While striving to achieve these ambitious goals we have put systems in place to improve the quality of our services, identify hazards assess risks and introduce appropriate prevention.

A continuous audit and review programme conducted by Line Management ensures the effectiveness of our Management System.

With the active commitment of all employees, the no blame culture and the QHSE responsibility of our Line Management we strive to deliver a high quality service while protecting the health and safety of our personnel and the environment in which we live and work.

Essen, April 2010



Körner



Rakers

Toolbox meeting at the start of a working day



What is our business?

DMT GmbH & Co. KG ("DMT") is an independent high-tech service provider offering services in mining, exploration and many other fields of engineering. The DMT Exploration & Geosurvey Division undertakes seismic surveys for a large number of clients all over the world. The goal of this surveying is generally to amass data so as to be able to portray subsurface geological strata which potentially holds oil and gas reservoirs.

Executing seismic surveys involves mobilising seismic crews, sometimes of vast proportions, and dispatching them to new and uncharted terrain. In doing this the crew has to transport large amounts of equipment over long distances. Owing to the nature of the work performed and the size of the crew in the field, plus the many vehicles moving around and the complex operations performed, a seismic survey is not a simple undertaking. Indeed it is associated with a number of significant risks so it is not possible to rule out incidents or accidents resulting in injury or even death.

The objectives of the QHSE Management System

- **Quality** - To provide a clear organisation, structure and guidance for all personnel so as to minimise the risk of incidents due to personnel not knowing how to perform their job
- **Health** - To protect the health of all our personnel at the workplace so as to minimise the risk of work-related illnesses and disabilities

- **Safety** - To provide a safe working environment so as to minimise any hazardous incidents that could lead to personal injury or death, and
- **Environment** - To operate in an environmentally responsible manner so as to minimise the risk of environmental pollution, irreversible damage and the loss of natural biotopes.

How does DMT go about QHSE?

DMT is committed to providing a safe and enabling work environment for its personnel, which in turn allows the company to provide first class services to its clients. DMT has a QHSE policy which provides general guidance on how to go about Quality, Health, Safety and Environmental aspects at the workplace. The prime objective of the current DMT QHSE Policy is for the Company to "do its utmost to protect its personnel and the environment in which we live and work".

To state this goal in simple terms with regards to the execution of our seismic work: "No one should get hurt – everyone in the crew should arrive fit and healthy, do good quality work and return home fit and healthy".



How does DMT ensure that its QHSE Policy is put into effect?

A multitude of DMT employees, each of them with a specific responsibility, are constantly working to ensure that the objectives of the QHSE Policy are achieved at the workplace. To help them reach this goal in a structured and organised manner DMT has developed and implemented a QHSE Management System (“QHSE MS”). This system is based on the following international standards:

- ISO 9001 – Quality Management
- ISO 14001 – Environmental Management
- OHSAS 18001 – Occupational Health and Safety Management

Moreover, when the system was developed various guideline documents of the following industry-specific bodies were referred to:

- OGP – International Association of Oil and Gas Producers, London, UK & Houston (Texas), USA
- IAGC – International Association of Geophysical Contractors, Houston (Texas), USA

What are the main features of the DMT QHSE MS?

In accordance with the recommendations given by the ISO standards and by OGP, the QHSE MS is made up of the following seven elements:

1. Leadership & Commitment
2. Organisation, Roles & Responsibilities
3. Evaluation & Risk Management
4. Planning
5. Implementation
6. Monitoring
7. Audit & Review

The QHSE MS is implemented on three levels within the organisation in a top-down approach.

These levels are:

- Organisational level – responsible for implementation are the managing directors of DMT GmbH & Co. KG
- Department level – responsible for implementation is the head of department
- Project / Worksite level – responsible for implementation is the party chief of the respective project worksite

What do the seven elements of the QHSE MS cover?

1. Leadership & Commitment

DMT uses a top-down approach in carrying out its QHSE MS, whereby the goal is to achieve a successful, proactive safety culture in a blame free environment. The following points are key commitments in performing our QHSE MS:

- Management demonstrates its commitment to safety – anywhere and every day
- Safety has equal priority to production
- The work environment enables a participative management style
- Safety measures and safe behaviour have high priority
- Risk taking behaviour is at a minimum
- Procedures are effective and efficient
- Tasks are supervised effectively
- Inspecting and auditing are used to monitor system effectiveness
- Personnel should have shared perceptions of relative risk
- Good organisational learning leads to continual improvement of our operations

2. Organisation, Roles & Responsibilities

This area covers the organisation structure, the roles within it and the respective responsibilities within the company. Responsibilities of a given role include the QHSE responsibilities. Other aspects covered in this section are:

- a) Allocation of resources, such as facilities, equipment, emergency response & time for learning and development
- b) Communication of information entering, flowing within and leaving the company
- c) Competence relating to job, staff and training requirements
- d) Selection and management of contractors and
- e) Documentation of the QHSE MS.

3. Evaluation & Risk Management

Risk Management at DMT proceeds as follows:

- a) Identify hazards – what could go wrong!
- b) Assess risks – likelihood of occurrence & possible consequences,
- c) Control risks – eliminate or at least reduce to ALARP, and
- d) Recover – limit consequences & return to safe working.



Data acquisition equipment prepared for a technical audit

For quantitative risk assessment the DMT Risk Matrix (based on OGP) is used. A project risk assessment workshop, which brings together the client, DMT and the subcontractors working on the project, is held well ahead of the commencement of a project to allow sufficient time for any identified risk management measures to be put into effect.

4. Planning

This section includes the QHSE plans, SOPs and WIs. Change management is also covered in this section. At project level the QHSE MS entails the Crew HSE Plan as well as the Project HSE Plan, and moreover also takes into account the client's QHSE MS. If significant discrepancies exist between the client's and DMT's QHSE MS the Project HSE Plan may be used as a "bridging document" documenting how QHSE management should be carried out in such cases.

5. Implementation

Work is carried out according to QHSE plans, standard operating procedures (SOPs) and work instructions (WI). Useful QHSE tools during operations are the daily diary, Toolbox talks, QHSE committee meetings, incident reporting & investigation, the permit-to-work ("PTW") system and the lock-out / tag-out system, as well as the reporting of QHSE key performance parameters.

6. Monitoring

- Active monitoring includes inspections to ensure that the planned checks are in place and that set QHSE objectives and criteria are met.
- Reactive monitoring includes reviews of incidents, high potential incidents & near misses. A QHSE tool used in this respect is the Remedial Work Plan.

7. Audit & Review

Internal and external audits of the QHSE MS are carried out to check whether QHSE plans, elements and activities conform to the scheduled arrangements and are performed effectively. An important goal of an audit is to assess whether the QHSE MS is functioning effectively to fulfil the policy objectives as well as performance criteria. Other goals are to investigate whether the system complies with legislation, guidelines and best practices. Furthermore the purpose of any audit is to identify potential areas of improvement.

The review of the QHSE MS is aimed at answering the question: "Are we going where we want to go?" Topics covered by the review include QHSE policies and objectives, allocation of resources, documents up for review, proposals for significant change and improvement, new hazards and lessons learnt.

Training for special situations – here a seismic river crossing using rigid inflatable boats (RIBs).





The required changes to the QHSE MS identified during the review are collated and put into effect by the QHSE MS representative. A review is prepared annually by the department management team.

Policies & Strategy

DMT currently has two policies at the organisational level, namely:

- a) the QHSE Policy and
- b) the Alcohol and Drugs Policy.

A non-smoking policy and a company vehicle use policy apply at worksite level only. All policies are signed by management at the respective levels and are generally publicised throughout the company. The contents of the policies are discussed regularly with the staff, and in addition QHSE objectives are agreed on in strategic planning meetings for the three different QHSE MS levels. These objectives are based on the SMART principle (Specific / Measurable / Realistic / Achievable within the Timescale provided) and specific QHSE plans are drawn up, implemented and monitored to ensure that they are achieved.

Other external factors influencing the QHSE MS (mostly at project level) derive from national, regional and local requirements of the host countries, for instance

- Laws and by-laws of the countries being operated in
- Regulations of the respective countries
- Local requirements and agreements with interested and affected parties and other stakeholders.

The DMT Quality Management System has been ISO 9001 certified by German Lloyd since 1996. The QHSE Management System for seismic operations was awarded the Safety Contractor Certificate ("SCC") in 2001. To uphold these certifications, external assessment organisations carry out annual audits of both the QMS and the QHSE MS. As with any audit, the findings are documented in a report and any modifications that need to be made are implemented by the person responsible. Up to now, there has been no major finding that has jeopardised the validity of certification.

DMT is a supporting member of the IAGC.





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