

Field Service Quotation Documents EN

Additional information and requirements to Field Service Quotation

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0 Modifications in this revision

- Paragraph 1
- Paragraph 3.4
- Paragraph 6.2
- Paragraph 7.3

1 Purpose and validity

The purpose of this document is to define the standards to ensure a successful, safe and efficient project conclusion reaching the required quality level.

It is essential for all involved parties to fulfil and to working accordance to the herein outlined requirements.

Do not hesitate to contact MAN Diesel & Turbo should there be any questions or if clarifications are needed.

This document is valid for all field service assignments of the business units I-O-S and the global organisation.

2 Tasks and responsibilities of MDT site personnel

2.1 General

Upon arrival, and before any MAN Diesel & Turbo (MDT) Field Service personnel will commence work at site at least the following will be done, resp. must be fulfilled:

- Introduction to customer
- Clarify site organisation and establish clear line of communication between all parties involved at site
- Safety Rules at site, Safety induction by customer
- Clear emergency organisation and procedures
- Check and approve infrastructure such as sanitary installation, office space, telecommunication etc.
- Availability of standard tools, special tools, storage place
- Location and availability of equipment and spare parts
- Agree on reporting and meeting schedule

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2.2 Definitions

MAN Diesel & Turbo (MDT) Field Service Department has different skilled and trained personnel to delegate to site for new installations, trouble shooting and service assignments on turbomachinery equipment:

- Mechanical Supervisor
- Mechanical Field Engineer
- Mechanical Commissioning Engineer
- Controls Commissioning Engineer

Below is a basic description of the tasks and responsibilities of the MDT delegated Field Service personnel. Other tasks and responsibilities can be assigned to by the MDT Field Service Management.

2.3 Mechanical Supervisor

A Site Supervisor is assigned to the site whenever activities on MDT equipment are performed. This starts normally with the open box inspection, and ends with the mechanical completion. He is the responsible MDT person at site and the contact person for the customer and subcontractors. He acts as site manager for all assigned MDT field service personnel including personnel of MDT subcontractors.

A separate site manager will only be assigned if ordered by the customer, or if several MDT, or MDT's subcontractors personnel are at site

The Mechanical Supervisor will hand over this responsibility for site management to the Commissioning Engineer after mechanical completion is achieved.

Main Tasks:

- Participation in site planning meetings to coordinate daily work
- Supervision and instruction of the local workers on correct turbo machinery equipment installation giving advice/instruction on specific tasks
- Hands-on work on critical tasks such as casing and rotor lifting, bearing and other clearance measuring, seals and coupling installation
- Performing/witness of coupling alignments
- Check/witness of process pipe connections to turbo machinery casings
- Quality and mechanical functional checks after installation of equipment
- Logging of all quality related activities in MDT checklists and protocols
- Completing all reporting, protocols, variation reports, time sheets and other administrative work
- Keeping a daily log of work done, and any problems encountered

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- Arrange and prepare tools, equipment, fixtures, etc. as required for the field service project during assignment to avoid any delays due to unavailability of such
- provide basic hands on training for customer and subcontractor personnel

Responsibilities:

- Acting as Supervisor/Site Manager during the installation of MDT supplied equipment up to mechanical completion
- Advises and supports the customer and his personnel in all questions related to the installation of MDT supplied equipment
- Leads and motivates a group of mechanics and other MDT Field Engineers at site.
- 'Responsible Person' with regard to Quality, Health, Safety and Environmental issues, as well as for any possible claim management associated with MDT work activities at Site.
- Responsible for the correct and safe installation of all MDT supplied equipment according to MDT quality standards
- For all required Site documentation and reporting on site work
- Solving problems during the installation process on site; he is the link to MDT headquarter
- Lead and direct field service activities during assignment in line with instructions, schedule and manpower resources.
- Monitor field sequence activities based on contractual scope and schedule and report regularly to office and if needed to client.
- Review of available job assignment documentation

2.4 Mechanical Field Engineer

Mechanical Field Engineers may be assigned to site to increase specialist workforce and to complement crew for larger jobs

Main Tasks:

- Perform all work at site in a safe, efficient, neat and timely manner as instructed by the MDT Supervisor
- Prepare necessary consumables, tooling and lifting equipment
- Plan, organize and direct activities at site to the personnel assigned
- Disassemble/reassemble rotating equipment on site including recording all the required data and proper marking of all the parts

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Responsibilities:

- Carry out tasks on new installations, maintenance and repairing activities on turbo machinery equipment as instructed by the Supervisor/Site Manager
- In the absence of a Field Service Supervisor, independently take over and carry out temporarily the leading tasks at site
- Ensure that all findings and work is clearly reported in writing
- Responsible for the quality, safety and work performance

2.5 Mechanical Commissioning Engineer

The Mechanical Commissioning Engineer takes over the MDT site responsibility after mechanical completion of the equipment, or at arrival at site. He is then the responsible MDT person at site and the contact person for the customer and subcontractors. For the commissioning of the controls an additional control Commissioning Engineer may be required.

The Mechanical Commissioning Engineer will hand over the equipment to the customer after successful commissioning/test run.

Main Tasks:

Pre-Commissioning

- „Loop Checks“ (electrical Signals)
- Check out correct function of auxiliary systems (lube oil, dry gas seals ...)
- Inspect process piping, valves and instrumentation
- Check of control logic, verify alarms and shutdowns

Hot Commissioning

- Start up of compressor, verify mechanical running behaviour
- Measure and record surge line
- Adjust and optimize control functions
- Supervise test operation and optimize process integration
- Complete commissioning of installations, including completing of all relevant inspections and checks, liaison with the client and the MDT project managers, and handover of the installation to the customer at completion of commissioning.
- Control and instrument trouble shooting and service work on all type of turbomachinery equipment
- Function testing of auxiliary equipment, such as lube oil pump, motors, actuator, etc.

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Responsibilities:

- Specialist for pre-commissioning and hot commissioning of turbo machinery and its auxiliaries
- Supports the customer in all questions related to commissioning of the MDT supplied equipment
- Controls and coordinates correct interaction between turbo machinery and customer process
- Instruction of customer personnel related to operation and maintenance
- Documentation and reporting on site work
- Solving problems if required with support of the MDT headquarters
- Responsible for implementation and upholding safety and quality control on site.

2.6 Controls Commissioning Engineer

A Controls Commissioning Engineer may be required for the commissioning of the control system.

This depending on the complexity of the system and the requirements for integration of the turbomachinery controls onto the overall plant controls.

Main Tasks:

- Commissioning of field instrumentation calibration check, loop-checks
- Commissioning of motor control centres, motors, control valves
- Checking, adjusting and trouble shooting of control systems, remote data transfer systems and other controls equipment
- Implementation of software modifications in control systems and/or visualisation systems according to MDT requirements
- Check of start up interlock alarm and shut down systems (engine protection)

Responsibilities:

- Specialist engineer for commissioning of instrumentation and control systems for units with extensive controls
- Supports the customer in all questions related to supplied control systems and instrumentation and their integration in plant controls
- Works together with Mechanical Commissioning Engineer
- Documentation and reporting on all site work done related to controls
- Solving problems if required with support of the MDT headquarters

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3 Minimum HSE (Health, Safety, Environment) and sanitary standards

3.1 General

One of the fundamental business objectives of MAN Diesel & Turbo (MDT) is, to ensure health and safety of their employees, the operators of our machines and other associates and to protect the environment during all activities

MDT follows the principle **"Safety first"**, meaning that no compromise or short cuts are taken when it concerns health and safety issues.

MDT employees have therefore a right to a safe and healthy working environment.

The control and reduction of risk related to environmental impairment as well as occupational hazards is one of MDT's prime objectives

MDT complies with legal and technical requirements and standards for safety in the working place such as ISO 14001 Environmental Management System and OHSAS 18001 (Occupational Health and Safety Assessment System)

The scope of work of MDT site services is typically limited to supervision of installation, trouble shooting, service work and commissioning of MDT scope of supply. This is carried out in close cooperation with the customer contractor's work force. In this function MDT engineers are required to be integrated in the customers and/or contractors HSE procedures to a large extent. This applies e.g. for site specific HSE briefing, site access control, emergency procedures and permit to work system. MDT Field Service Engineers are instructed to familiarize themselves with the systems in place. MDT Field Service Engineers will cooperate with the requirements on the construction site.

Detailed and comprehensive HSE information and procedures are listed and included in the MAN Diesel & Turbo *"Installation Manual"*

3.2 HSE inspection prior commencing work

The MDT field service department and the field service engineers are certified for HSE according to the SCC (Safety Certificate Contractors) and will follow the rules set by SCC if it comes e.g. to works HSE, accident reporting, checklists and continues HSE training. Field Service Engineers receive a job specific briefing at the works prior to being delegated to sites. Field service engineers, carry a personal safety logbook of safety trainings and medical checks.

Should the customers HSE requirements and standards be more stringent than the MDT standards then MDT personnel will follow the higher standard.

The MDT personnel will, prior to commencing any work or supervision at site, evaluate the HSE and sanitary situation at site using a standard checklist which is available on request prior to the arrival of MDT personnel.

MDT personnel will inform customer at site about possible safety hazards (HSE assessment) or short comings. Urgent corrections must be completed before MDT personnel will commence work.

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If customer does not react and implement the needed corrections in time, the site may be demobilized, based on decision of MDT Field Service management, until deficiencies have been corrected.

3.3 Protection from hazardous/critical substances and material at site

The customer must ensure that all MDT personnel are never exposed in any way to harmful substances, such as irritant gases, respirable asbestos fibres, caustic liquids etc. Reference is also made within the General Terms and Conditions for the Completion of Erection, Commissioning, Service and Maintenance, Paragraph 4.1.4

The customer must undertake the necessary mitigation to prevent emissions of hazardous materials like hexavalent Chromium (as a metal and oxide), Nickel (as a metal and oxide) and other metals (Cobalt, Vanadium, Manganese etc.) mostly in the form of dust and / or fumes.

3.4 Sanitation and washing facilities

Washing facilities (minimal: a sink with flowing fresh water and soap) should be provided and accessible for all MDT personnel within reasonable distance.

European type toilets shall be made accessible to MDT personnel. Such toilets must be located within reasonable walking distance from working area and should be private and in good working order with an adequate supply of toilet paper. Ideally, inspected and cleaned at least daily.

OHSAS and ANSI Z4.3-1995 standards shall be used as guideline for above.

Reference is also made to the General Terms and Conditions for the Completion of Erection, Commissioning, Service and Maintenance.

3.5 Emergency medical treatment

MDT expects a site organisation for first aid treatment of injuries with capabilities to treat any injury up to life threatening accidents correctly. The customer emergency first aid treatment needs to be provided by a medical doctor, if the nearest doctor is more than 30 minutes away. First aid assistance must be present on the place of the accident within 15 minutes. The first aid assistance must be available at all times, when work on site is proceeding.

An established system with emergency procedures and emergency calls to mobilize the first aid must be in place. A well-equipped emergency station for treatment of minor cases (e.g. small cuts and illness) and first treatment of major injuries (e.g. fractures, big cuts, loss of body parts) must be available. A back up from an ambulance to bring the injured to the nearest hospital for serious cases must be in place. Requirements for capabilities on site depend on the distance of the nearest doctor and hospital.

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3.6 Right to withdraw personnel

MDT reserves the right to withdraw its personnel at any time, if the situation at site is, or changes to an unsafe status or exceeds the level of control of the local administration.

4 Requirements for tools, site equipment and infrastructure

4.1 Special tools

MAN Diesel & Turbo (MDT) will provide special tools and fixtures as part of the scope of supply for new equipment installations if and as specified in the contract.

These special tools will also be needed for later maintenance work.

The customer is responsible that such special tools and fixtures are properly maintained, stored at site and made available as requested by MDT personnel.

4.2 Standard tools / Measuring Equipment

Standard tools are all those tools which are not considered as specially made up for the offered/supplied equipment.

Standard tools for installation and maintenance are e.g. wrenches, torque wrenches, screwdrivers, drilling tools, flogging spanners, files, measuring equipment, hydraulic jacks, chain blocks, slings and other rigging material, etc.

Standard tools for electrical and instrumentation commissioning and maintenance purposes are: e.g. multimeter, calibration equipment, field communicator, etc.

A comprehensive amount of high quality standard tools are required for the installation, commissioning and maintenance of the equipment.

Such standard tools must be supplied by the customer or its subcontractor and must be ready/calibrated upon arrival of the MDT personnel.

MDT can supply a list of recommended standard tools and technical aids.

MDT can quote and supply such standard tools or fully equipped tool containers as well

MDT can also supply such standard tools or fully equipped tool containers on a rental basis.

Those tools will be used to operate on very sensible and expensive equipment. Therefore MDT requests that tools are generally of superior quality, in proper condition, calibrated and always available.

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4.3 Storage / Consumables

Storage areas, such as lockable containers with shelves and boxes must be provided near the installation area. Such clean storage rooms or containers will be used to store parts, spare parts etc. in a neat and proper way and safeguard them from unauthorized use.

All required consumables such as cleaning agents, lubricants, preservation material, sealants, cleaning rags, etc. must be made available as soon as the MDT personnel arrives at site.

MDT can provide a list of recommended consumables if requested.

MDT can supply the needed consumables required for the installation and/or service of the turbo machinery installation. A respective list and quotation can be provided if requested.

4.4 Cranes and rigging equipment

Customer shall ensure timely availability of all the required cranes and lifting equipment, allowing agreed schedules to be maintained.

All provided cranes, slings, shackles etc. must be tested and a valid test certificate must be made available. Test certificates are to be presented to MDT supervisor upon request.

Cranes and other lifting facilities are not in the responsibility of MDT

Unless specifically agreed to the contrary, cranes and other lifting facilities shall be operated by the customer's operators.

The MDT Field Service Engineers however reserves the rights to visually inspect any cranes to be used, carry out a basic functional test of the cranes with a test load, such as checking the function of the brakes, emergency stop; low and fast speed as well as limit switch for the crane hook.

4.5 Office and communication

Customer shall provide for the MDT site personnel a proper conditioned and lockable site office, containing standard office furniture's.

Such shall be equipped with all the necessary communication means such as telephone and internet access.

4.6 Utilities

The customer must provide all utilities required for the installation or service work such as:

- Electrical power
- Telephone and Internet connection
- Domestic water
- Drinking water

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- Compressed air
- Heaters, if needed

5 Working time regulations

5.1 Responsibility of MDT for its employees

MAN Diesel & Turbo (MDT) as the employer of the delegated personnel is aware of its responsibility and duty of care towards its employees as largely extended working hours lead to increased HSE risks.

Therefore the following is binding for all MDT personnel as well as for subcontractor's personnel working for MDT.

5.2 Adherence to legal requirements in country of installation

MDT 's Field Service personnel is required to **comply with the legal limitations of working hours in the country of installation.**

The legal limit known to MDT will be stated on the delegation papers of the personnel.

In cases where the customer has an official exemption to the general local regulations of working hours (from the respective authorities) for the specific site or for a specific task this shall be advised to MDT prior to commencing of the job. The personnel will then be informed and the delegation papers will be issued accordingly.

5.3 MDT's maximum allowable working time

If legal limitations of working hours in the country of installation are less stringent, the following general MDT limits on working times are mandatory for MDT's personnel.

Onshore

- A maximum daily working time of 12 hour per day may not be exceeded. The working period has to be interrupted by adequate breaks (minimum 30 minutes if working up to 9.5h, minimum 60 minutes if working more than 9.5 hours)
- After the daily working time an uninterrupted rest period of minimum 11 hours has to be maintained
- One day off work per week is to be observed

Offshore

- Assignments are limited to a maximum of 28 days with work on 7 days per week.
- A standard working time of 12 hours per day applies including breaks. The working period has to be interrupted by adequate breaks (minimum 60 minutes per work period)

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- After the daily working time an uninterrupted rest period of minimum 11 hours has to be maintained
- (The required days off will be observed after the end of the offshore assignment)

5.4 Exceptions for emergencies

Exceptions to above can be granted for emergency cases, where life or well being is at risk or in case of extraordinary commercial impact. Such cases need prior approval by the direct superior of MDT's personnel on the basis of a request form signed by the customer. The working time for such cases may be extended to 14 hours per day.

If emergency work is required on the weekly day off, a substitute day off has to be granted within the following 2 weeks.

MDT management will approve such requests, if appropriate, at short notice. Hazardous materials at site

6 Dangerous goods on side

6.1 Protection of Personnel and Environment

One of the fundamental business objectives of MAN Diesel & Turbo (MDT) is, to ensure health and safety of their employees, as well as for anybody working within the MDT working area or under the supervision of MDT, during all activities at any plant site and protect the environment.

6.2 Dangerous goods

Dangerous goods are solids, liquids, or gases that can harm people, other living organisms, property, or the environment.

Dangerous goods include materials that are radioactive, flammable, explosive, corrosive, oxidizing, asphyxiating, biohazardous, toxic, pathogenic, or allergenic. Also included are physical conditions such as compressed gases and liquids or hot materials, including all goods containing such materials or chemicals, or may have other characteristics that render them hazardous in specific circumstances.

Dangerous materials are categorizing into three categories:

- Prohibited substances
- Regulated substances
- Harmless substances

MDT has listed the most common materials and substances which may be present in a typical turbomachinery installation application. A more extended list is available on request.














Reference is also made to General Terms and Conditions for the Completion of Erection, Commissioning, Service and Maintenance.

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The following substances and materials, which may be present in turbomachinery installations, have been detected as critical, as they may harm personnel and/or environment.

<p>Ammonia NH₃</p>	<p> H331 Toxic if inhaled.</p>	<p> H314 Causes severe skin burns and eye damage.</p>	<p> H400 Very toxic to aquatic life.</p>
<p>Asbestos</p>	<p> H350i Breathing in may cause cancer. H372 Causes damage to the lung.</p>	<p>MAN Diesel & Turbo SE does not allow work in atmospheres containing asbestos fibres.</p>	
<p>Hydrogen sulphides H₂S</p>	<p> H330 Fatal if inhaled. H319 Causes serious eye irritation.</p>	<p> H400 Very toxic to aquatic life.</p>	<p> H220 Extremely flammable gas.</p>
<p>Carbon monoxide CO</p>	<p> H331 Toxic if inhaled.</p>	<p> H360D May damage the unborn child. H372 Causes damage to organs (a.o. heart and brain).</p>	<p> H220 Extremely flammable gas.</p>
<p>Benzene C₆H₆</p>	<p> H304 May be fatal if swallowed and if entering respiratory system. H340 May cause genetic defects.</p>	<p> H315 Causes skin irritation. H319 Causes serious eye irritation.</p>	<p> H225 Highly flammable liquid and vapour.</p>

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<p>Chlorine Cl₂</p>	 <p>H315 Causes Skin Irritation.</p> <p>H319 Causes serious eye Irritation.</p> <p>H331 Toxic if inhaled.</p> <p>H335 May cause respiratory irritation.</p>	 <p>H400 Very toxic to aquatic life.</p>	
<p>Nitric acid solution HNO₃</p>	 <p>H314 Causes severe skin burns and eye damage.</p>	 <p>H272 May intensify fire; oxidiser.</p>	
<p>Nitrous fumes</p>	 <p>H330 Fatal if inhaled.</p>	 <p>H314 Causes severe skin burns and eye damage.</p> <p>H319 Causes serious eye irritation.</p>	 <p>H220 Extremely flammable gas.</p>

6.3 Mitigating risks at site

Mitigating the risks associated with hazardous materials and substances at site may require the application of safety precautions during their transport, use, storage and disposal.

It is the customer's responsibility to take all the needed precautions not to endanger the MDT personnel at any time during their assignments at site.

Any dangerous material, substance and hazardous wastes must be properly labeled and stored by the customer.

Customer to ensure to have a response team specifically trained to deal with accidents and spills in place.

Laws and regulations on the use and handling of hazardous materials must be obeyed at all times.

The customer shall provide all required PPE (Personal Protective Equipment) for emergency cases to MDT personnel.

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6.4 Right to withdraw personnel

MDT reserves the right to withdraw its personnel at any time, if the situation at site is, or changes to an unsafe status or exceeds the level of control of the local administration.

7 Customer's assistance obtaining visa, temporary work permits and taxes

7.1 General

Obtaining visas and temporary work permits in all the various countries where the MAN Diesel & Turbo (MDT) Field Service Engineers are being delegated to can be a rather time consuming and costly effort.

MDT will observe all legal requirements of foreign countries, also in connection with the visa and work permit regulations. MDT will only delegate the site personnel once all the legal requirements have been fulfilled. Most countries require a dedicated temporary working visa.

(A tourist visa does not qualify for site work)

7.2 Visa and work permits

MDT needs the active assistance and support from the customer in acquiring the needed information's with regard to visa and temporary work permit requirements in the country where the MDT personnel will perform the assignment at an early stage of the project.

The customer shall support MDT in completing the necessary forms and issue the invitation letter or any other forms and documents requested by the local government.

If Visa/Police registration on arrival is required by the local law then the customer shall provide the needed assistance in order not to cause any delays.

MDT notification time is usually four to six weeks for the delegation of Field Service Engineers.

The process time for the visa and temporary work permit required by the respective local government often absorbs several weeks or even months, therefore anticipation and good coordination between the involved parties is needed to avoid lengthy delegation delays and jeopardise the customers' schedule.

In cases where the visa obtainment process requires a MDT Engineer to travel abroad, associated costs will be charged to the customer together with the field service invoice.

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7.3 Taxes

Refer to the General Terms and Conditions for the Completion of Erection, Commissioning, Service and Maintenance b.

8 Travel safety measures for risk areas

8.1 Information required for travel release to risk areas

For delegations into risk areas, customers are advised that MAN Diesel & Turbo (MDT) can only delegate staff to risk areas if the safety, security and health of its employees can be ensured.

MDT management uses as a basis its own risk classification list.

The list classifies various risk categories such as political instability, terrorism, crime rate etc., and is based on government guidelines and public safety risk bulletins as well as MDT risk evaluations

The list is updated regularly by the MDT Management.

Before the delegation of personnel to risk areas, detailed security and safety precautions will be checked. Usually the customer or business partner runs a local security and safety organization to arrange the required measures. MDT expects that staff will be fully integrated into this security and safety concept of the customer. MDT itself cannot provide this organization.

MDT requests that the customer gives a full presentation of the security and safety measures which, as a minimum, should include the following:

- Arrival and departure procedures
- Accommodation and lodging,
- Daily transfer to and from site,
- Site security,
- Emergency and crisis management procedures,
- Emergency medical treatment facilities on or near the site.

Also required is information on contact details of the local security and safety manager.

Before a delegation takes place MDT will check, whether the security and safety measures will meet the requirements. If necessary, MDT will conduct an inspection visit at the respective site. MDT will release delegation of personnel only after successful review.

The delegation of MDT personnel in risk areas is on a voluntary basis. The designated person can withdraw his approval, if it becomes clear that his decision to travel was based on misleading information.

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8.2 MAN Diesel & Turbo typical requirements for Travel and Security Concept in risk areas

8.2.1 Air travel organised by customer

If air travel within country of assignment is organized by the customer, full travel arrangements (air line, booking, and utilized aircraft) shall be provided by the customer for cross check by MAN Travel Management. Trip will only be released after approval by MAN Travel Management.

8.2.2 Transport from/to Airport

Pick-up by a designated person, who identifies himself as a customer's company representative, inside the terminal building. Prior exchange of photographs & telephone numbers of contact person. Car to be in proper technical condition. Driver must drive cautiously.

Transport in a civil car, escort by security guards if required by MAN, daytime transports only.

Direct transport to site / hotel / guest house with no stop-over (e.g. at filling stations / shops or other).

8.2.3 Accommodation

Hotel / Camp / Guest House must have adequate security level (e.g. access control, security guarding, physical security measures). This is also valid for stop-over's during travel to site.

8.2.4 Daily transport

Pick-up by a designated person, who identifies himself as a customer's company representative, inside the hotel building. Car shall be in proper technical condition. Driver must drive cautiously.

Transport in a civil car, escorted by security guards if required by MDT

Direct transport to site / hotel / guest house with no stop-over (e.g. at filling stations / shops or other).

8.2.5 Security at site

Site protection involves the following measures:

- Perimeter security
- Permanent guarding of the site
- Entry and access controls
- Physical protection and monitoring of the site
- Control and management of the delivery and visitor traffic

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- Intervention through local security units

8.2.6 Cooperation with foreign Cultures

MDT personnel respect all religious and ethnical cultures. Nevertheless it should be taken care of, that MDT personnel is prevented from hostile actions / discussions with people who disrespect the Western (European) style of living. The customer should take care that the designated contractors respect the differences in culture between them and MDT personnel.

MAN personnel will adapt to most of the local customs, some people might find it offensive to meet our personnel in private situations (meals, recreation, showers etc.) The customer should take care that all contacts between MDT personnel and local people at site are in a friendly and truthful atmosphere.

8.3 Right to withdraw personnel

MAN reserves the right to withdraw its personnel at any time, if the situation in the country of designation changes to an unsafe status or exceeds the level of control of the local administration. This might be:

- Security measures are not as described for travel release or do not meet minimum standard
- Threats by natural disasters
- War or civil war
- Demonstrations
- Criminal attacks
- Terrorist attacks
- Riots
- Strikes
- Internal ethnical / religious conflicts
- Outbreak of dangerous diseases

Within MDT a travel safety and security concept is established to support above procedure in cooperation with a specialized external Security Company.

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9 Pre-installation meeting and site inspection

9.1 General

In most projects it is advisable to have a pre-installation meeting to clarify and agree upon all administration, communication issues relating to the installation phase and subsequent commissioning.

This clarification is required for the proper preparation of any field service related issues and for the briefing of the MAN Diesel & Turbo (MDT) field service representatives (FSR) prior mobilisation to site.

Clarification is also required to understand the customer's installation and commissioning schedule and constraints so that potential risks can be identified, managed and resolved.

Typically the pre-installation meeting is held at the site offices on the installation site.

MAN Diesel & Turbo (MDT) aims for a trouble free assignment, in line with the agreed time schedule. Combined with this MDT seeks to achieve high quality standards while complying with HSE requirements.

This will ensure meeting customer's expectations, eliminates unnecessary communication and other misunderstandings, and prevents possible additional costs.

9.2 Pre-installation meeting

MDT thus strongly recommends that an early kick off meeting for new installations is mutually agreed upon between customer and MDT.

Such meeting(s) shall be attended by the MDT Field Service Coordinator plus the Project Manager. If required by the customer, other MDT key personnel involved in the project during installation and commissioning can be included in such meetings.

Such a meeting should be held sufficient time prior to site mobilisation, but not later than two months prior to the scheduled commencement of the installation.

MDT suggests the following agenda for such a kick off meeting:

- Goals of Meeting / Review Meeting Agenda
- Introduction Meeting Participants and Customer-, Contractor Personnel
- Personnel / Mob Demob / Visa / Working Hours / Site Requirements etc.
- Work scope / Activity Programme
- Logistics, Materials, Spares, Tools & Consumables
- Documentation, Reports, Procedures, Quality and Drawings etc.
- HSE requirements at Site
- Commercial Process and interfaces
- Meeting Review, Close Out and Signatures

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9.3 Site visit and readiness to commence site work

A site visit shall be planned with the MDT delegation to assess status of site preparation and readiness for installation of MDT equipment. Any unusual Quality, HSE or other deviations will be reported thus allowing the customer to initiate the needed corrective measures in due time.

All open issues and findings must be confirmed as completed prior to the delegation of MDT personnel.

If the pre-installation meeting is not on the installation site, and it becomes obvious, that for better site coordination a site visit shall be arranged, MDT requests that the customer organizes a visit in due time prior to the arrival of the MDT personnel.

10 Documentation

10.1 Project documentation & records

The documentation shall fulfil the contractual requirements as well as ISO 9001, ISO 14001, OHSAS 18001, CE conformity and any other legal obligations.

Several Technical-, Quality-, HSE-, Administration- and other Organisational documents will be issued and completed by MAN Diesel & Turbo (MDT) during the engineering and manufacturing and works test phase of the project. MDT expects that the customer's personnel is advised to fully cooperate to finalize these documents as they are pre-requisites for a proper project closing and for finalizing the work on site.

During the installation and commissioning phase on site the documentation on MDT's scope of supply has to be completed/updated to the "as commissioned" status and additional records and protocols will have to be taken.

The customer must make available to the MDT personnel the necessary documents from the preceding project phases as needed for the proper installation, commissioning and for service work. A hard copy of the Operation and Maintenance Manuals supplied by MDT for its scope of supply shall be available on site during site work. Manuals for equipment interfacing at MDT's scope shall also be available for reference. For details with regards to installation and commissioning, reference is made to the Installation Manual supplied by MDT.

The MDT site manager will have access to proprietary documents from MDT as needed. **These documents will remain the property of MDT and will not be handed out.**

10.2 Installation / commissioning documents to be signed by the customer

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Certain documents and records, which will be issued during installation & commissioning by the Field Service personnel, are required to be countersigned by the customer. Some of the documents may have to be signed for commercial and/or contractual purpose; others may have to be signed for acknowledgment purpose only. A copy of such signed documents will be handed to the customer.

The following list covers the standard documents which need to be countersigned, however, depending on nature of the project, further documents may be added.

- Weekly reports (unless agreed to the contrary at site)
- Checklist Inspection of Working Place (HSE)
- Open Box inspection report
- Site Memorandums due to site variations or technical issues
- Emergency work requests by either side
- Memorandums concerning HSE issue
- Time sheets
- Equipment taking over certificates / acceptance certificates
- Waiver agreement, if control hardware and software is not supplied by MDT
- Customer feedback form

Proper records from installation and commissioning, as well as from prior service interventions will help MDT to provide comprehensive customer support in case needed.

11 Responsibility

Responsible for updating this document is department RF (Field Service).

Ende des Dokumentes

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