FROM: Joel Gusman

SUBJECT: (**PTI Services Information)**

Please find attached listed below PTI (Pipe Tracking Inspections, Inc) Services Information as requested.

## PTI Inspection Services

Inspection services are an integral factor in successful project management. The necessary requirements are personnel with experience, expertise, certifications and relevant training.

PTI offers inspection personnel with the appropriate credentials necessary to verify compliance with customer specifications. These include AWS certified welding inspectors, NACE certified coating inspectors, API and ASME qualified inspectors, as well as ASNT rated inspectors. This guarantees the highest level of performance by contractors in any marine construction or pipeline environment.

Our personnel have been involved in ultra deep water pipe lays, J-lay operations, directional drills, beach approaches, river crossings, high temperature, and H2S pipelines.

Platform, deck and module construction, metering facilities, pressure vessels, interconnecting piping, along with instrumentation and electrical inspections, have been performed by PTI personnel, often in conjunction with the Lone Star PTS. (Pipe Tracking System) program.

PTI inspectors have worked in pipe mills in the USA, Mexico, Brazil and as well as in coating yards using the entire spectrum of applications.

Inspection of underwater construction is carried out by our personnel with expertise in diving, ROV, and one atmosphere diving suit operations and have included platform inspections, hyperbaric weld repairs, tie-ins, platform removals, riser installations and hot taps.

Most importantly, PTI inspectors maintain a communication link with our clients insuring the exchange of information critical to the successful completion of the project.

Inspectors are available in all disciplines including welding, nondestructive testing, mechanical, rotating equipment, paint and/or coatings, electrical, instrumentation, civil, structural, HVAC, and more.

For example, on pipeline construction projects, PTI can provide a complete team of experienced personnel including the Chief Inspector, Welding/NDT, Utility, Right-of-Way, Environmental, Safety, Coatings, SCADA, Technical Clerks, and any other positions as required.

## QAQC Management Services

PTI QAQC Project Management Services have been designed to ensure that complex projects are executed safely and to the complete satisfaction of the owners/investors. PTI can supply an in house QAQC Manager to work with your existing project team to manage all QAQC activities out in the field, onshore/offshore: Listed below are the areas PTI QAQC Managers specialize in:

- Fabrication Management
- Vendor Surveillance
- Welder Qualification
- WPS & PQR's
- QAQC Services
- Procedure Reviewing & Writing
- Offshore QAQC Services
- Onshore QAQC Services
- Construction Management

With a wealth of construction experience across multiple industries, PTI provides internationally experienced personnel to assist clients with their construction related activities, including the following:

- Material Management and Control
- Project Consulting
- Pipe Mill Tracking & Inspection
- Onshore LoadOut Management & Inspection
- Project Monitoring, and Progress Control
- Project Site Management Services
- HSE Management Issues
- Data and Records Management

PTI relevant project experience encompasses chemical plants and refineries, pipelines, offshore platforms.

## Product Surveillance

Because PTI provides manufacturing inspection services, the term "product surveillance" is used to encompass Vendor Surveillance and Source Inspection Services. PTI QA/QC personnel can be quickly dispatched to any location worldwide with adequate lead time, anywhere on the globe, to accommodate our customers' quality requirements. The ability for us to function in this fashion eliminates unneeded costly expenses and unnecessary downtime for our customers. Upon receipt of a purchase order, the PTI Field Service Inspector will obtain pertinent drawings and specifications along with the pre-award survey report, if available. After review of all relevant documentation, a quality plan will be formulated which outlines the technical considerations and criteria for inspection.

The quality plan will address primarily:

Materials of Construction
Welding
Nondestructive Examinations
Heat Treating
Parts and Assembly Inspection
Protective Coating
Construction and Dimensions
Documentation
Marking and Tagging
Packing

The quality plan will further detail:

Specifications
Applicable codes
Items, processes or activities to be visually examined
Dimensional checks to be carried out
Nondestructive tests to be conducted/witnessed/verified
Documentation to be reviewed and submitted prior to shipment
Tests to be witnessed
Vendor surveillance and source inspection activities are carefully planned and methodically executed according to the plan. After each visit, a complete report will be submitted detailing the extent of the inspection conducted and all relevant findings.

## Consulting

PTI can staff your projects with professional project managers and QAQC inspectors who become part of your existing project team and work as if they were your direct employee, independent of PTI management. This is a perfect solution for companies seeking to supplement their teams, but who do not have the need or ability to direct hire. PTI employees will work at your office for the entire project SOW, depending on our clients' needs.

We will generate specific procedures and implement PTI's - Lone Star Pipe Tracking Program to suit your projects need. Whether it's an EPIC project needing our Pipe Tracking & Inspection Team from the first stage of the pipe mill manufacture or at the load out facility, where the line pipe is ready to be shipped offshore for the construction installation phase.

Please contact us @ PTI to support your major short/long term projects. Whatever your project support needs, PTI is here to help you achieve success.

## Pipe Mill Manufacturing Tracking & Inspection Service

During this stage it is critical that the pipe is manufactured according to the client's specifications. We here at PTI understand those needs and can provide experienced personnel for the Inspection/Tracking process. PTI's Lone Star Pipe Tracking System will be utilized during this stage for the following:

- Bar Code Implementation - Labeling Printing
- Pipe Inspection Specifications
- As- Built Master Tally Report Generation
- Bar Code & Labeling Pipe Tracking

Bar Codes can be implemented during any stage of the manufacturing process. We can review & inspect the current Master Tally Data List and apply barcodes to the entire pipe inventory stock once a sweep has been made. This allows the client to be re assured that the Master Tally List is current with the stencil data applied on the pipe from the manufacture and is accurate. This also makes it a smoother transition for the other tracking stages by utilizing PTI's barcode scanning traceability technology.

## Load Out Operation Management Services

PTI – Will manage the entire load out facility for you by providing your project with our experienced Load Out Superintendents. We not only provide pipe trackers and inspectors for the pipe tracking & inspection process, we will also manage the entire onshore load out operations for your company.

PTI - Load Out Management will manage the following:

- Load out facility – Pipe Yard
- Coordinate logistics of pipe haulers or cargo barges & tugs incoming/outgoing
- Manages port and dock facility workers
- Interacts with engineering team offshore/offshore – regarding pipe load outs
- Coordinates with coating contractor regarding pipe movement, crew & load outs
- Communicate with project management team on daily progress
- Coordinates and manage in-country pipe load out & shipments
- Updates Vessel(s) pipe hauler/cargo barges loadouts – vessel status movement reports
- Coordinate logistics of pipe haulers or cargo barges & tugs for fuel, water, etc…

## Pipe Tracking & Inspection Service

The Lone Star Tracking System is design to track the pipe from the mill manufacturing to the installation stage sub sea. During each phase, quality reports are generated throughout each initial process. (See below) Upon completion of each shift, reports will be logged and sent to the P.T.I Website for As-built documentation traceability. This allows constant communication between onshore/offshore project personnel in order to review daily production reporting.

- Pipe Tracking Phases:
- Pipe Mill
- Fbe Coating
- Concrete Coating
- Spool Base/Stalking – Reel Jobs
- Spool Fabrication

- Load Out Base Operations
- Installation Processes
- Pipe Tracking Process

Electronic Pipe Tracking – A pocket pc will be used during this phase with the entire inventory imported into the system and recalled when the pipe is loaded onto the cargo barge. Also the LSPTS has incorporated within a pipe inspection feature to ensure that every pipe that gets loaded onto the barge meets the client inspection specs. This feature is prompted as soon as the tracker enters the pipe data

Manual Tracking – A load-out tally sheet will be used during this stage. The pipe tracker will record each pipe as it is loaded onto the cargo barge. This process will continue until the cargo barge is fully loaded. The pipe data will also be double checked with a Master Tally list assuring that the data being recorded is accurate.

PTI objectives of this plan are to:

- Provide the basis of how PTI will execute the inspection activities at the Load-out yards,
- Provide assurance that the pipes loaded on the cargo vessels satisfy all of the project requirements,
- Identify the inspection activities to be carried out,
- Identify rejected material and provide details of remedial work to be performed if possible,
- Ensure that documentation is generated to provide objective evidence of satisfactory completion of the stages required to execute the work,
- Ensure that applicable records of inspection are collated and submitted as required by contract,
- Provide Pipe Tracking Traceability,
- Record the data from the pipe prior to loading on the “Load Out Tally Sheet”,
- Perform the statistical pipe data inspections,
- Check recorded data against master tally provided by the LSPTS,
- Answer questions regarding pipe when needed,
- Relay tally information to the Pipe Tracking Supervisor at convenient intervals to ensure timely report generation,

- Ensure the required Anode, Spools and Buckle Arrestors quantities are loaded,
- Report to Pipe Tracking Supervisor,

Load Out Inspection Process

PTI - Lone Star Pipe Tracking System, Pocket PC, has integrated inspection capabilities that will maintain accurate Pipe Tracking, NCR's and OS&D reporting. Our QAQC inspectors use the latest inspection tools (see below) during each process to ensure that client specifications are met. If specifications are not met, NCR's and OS&D reports will be generated and the pipes will be flagged, as rejected, and set aside. All parties are involved during this process to ensure that everyone is informed of the damaged pipe.

Listed below are P.T.I.'s Inspection Tool List

- Standard measuring tape,
- Steel measuring tape, 50 ft. minimum length in 1/100' or laser for measuring lengths,
- Gauss gauge, for magnetism checks,
- External diameter tape,
- 36 in. deep callipers,
- 100 mm (6”) callipers,
- Go gauges,
- Taut string or wire for straightness measurement,
- Protractor

## Offshore Pipe Tracking Technology

(LSPTS) This is what you need.

Quality Control - Lone Star (PTS) is a comprehensive application for the control and management of all items utilized in the fabrication of a pipeline. It provides the quality control links between design, materials, welding, examination and coating. Quality assurance functions are also an integral part of the system by recording all welds, repairs and re-weld details as well as radiography, ultrasonic and magnetic particle examinations.

Full Status information is maintained on all material-detailing the stages and its current location within the fabrication process. This also enables the system to record and display the pipeline length and volume at any given time, and helps to ensure that a full material reconciliation can be performed as soon as the project is completed.

Lone Star (PTS) offers users a real competitive advantage. Key features, such as, the comprehensive report, search and status functions, combine functionality and practicality to deliver improved pipeline management.

Improving efficiency

Lone Star (PTS) is fully scaleable system, available as a stand-alone or client server application, with the operating platform being SQL or Oracle dependent on client requirements. It delivers all the benefits you would expect from an automated pipeline control and monitoring system- including reduced cost, improved efficiency, and the global availability of information. Most importunately, however, it offers effective material traceability and quality assurance for the entire process of pipeline fabrication from the chemical analysis of the casts of the steel through to as-laid records of the completed pipeline.

Support service

Lone Star (PTS) is backed up by a comprehensive range of off-site support services. All clients are offered assistance with installation and start-up. Although the system's intrinsic ease of use means that such help is often not required. In addition, specialist on-site training can be tailored to suite the needs of individual users.

Once Lone Star (PTS) is installed and operational, support is provided through a Helpdesk facility at PTI - Business Solution- and a remote dial-in support option is also available if required.

The superior solution

Lone Star is the pipeline control and monitoring software solution you are looking for. It is easy to use, functional and efficient. It brings a new dimension of quality to all aspects of pipeline fabrication. In short, by choosing to invest in Lone Star (PTS), you are bringing the management of pipeline fabrication into the 21st century.

This is what you need… Comprehensive reporting Lone Star system

Overview - The system had a comprehensive range of reports covering every aspect of the pipeline process, examples of the available reports are:

A Pipeline Sequential report will print information for any specified segment in the pipeline, and in either direction.

A Mainline Welding report identifies the pipe numbers, weld numbers and welders involved in the initial fabrication prior to repairs and re-welds.

General Welding reports cover all off-line welds, such as repairs, re-welds, tie-ins and special assemblies.

The Examination Records displays the results of the various examinations carried out on each weld for example Radiography, UT, and MPI.

An as-built and as-laid displays the sequence of pipes and welds that form the final fabrication. This ensures that the final reconciliation can be performed as soon as the project is completed.

A material summary report indicates the quantity of material for each pipe size and location. This is updated throughout the fabrication process, identifying the exact status of individual pipes, if they are used. If so, where they are in the line, the weld number, and the examination results.

The progress report details the totals for a specified period of welds started, completed, examined, accepted and coated, as well as totals for repairs and cutouts.

This what you need… a pipeline management system which reduces data input

Overview
Lone Star (PTS) provides pipe-tracking capability which provides the means to locate all material on site. From the moment that material arrives on site, the system records the location and status of each material item, where it was welded, when it was welded, or why it could not be used. The system gives a unique serial number to identify each pipe, using the heat number and length as a cross-check whenever possible. By this means the system minimizes the problems of clerical error and the difficulties that occur with so many pipes that all look much the same!

Electronic pipe import
Information from the pipe supplier can be imported directly into the system, reducing, the time involved in manual entry and the risk of clerical error, while providing a link to information from the pipe manufacture and coating stages.

Classify all sizes
The system classifies all pipes and fittings according to outside diameter, wall thickness and grade, and will indicate any attempt to weld together dissimilar items (as either a transition weld or a mistake).

Always know where your material is
The system keeps track of the receipt of material and where it is located, reducing the physical effort involved in locating material items.

Avoid use of bad material
Every item is classified with a status, and every suspect item can be classified with a status reason. The system will highlight any attempt to weld suspect material into the pipeline, reducing the need to cut out welds.

This is what you need… an easy –to – use system with its own workflow facility

Overview

Lone Star (PTS) recognizes the speed of a typical production line and the vast quantity of data that this will generate. The system implements fast-key drop-down lists and uses valid assumptions to ensure that data can be entered as rapidly as possible. It recognizes that the best people for entering the data are the inspectors first and system operators second, and keep the screen as simple and straightforward as possible

- Identify what examination reports are missing
- Each weld is classified by type, which will determine the NDT requirements.
- Verification of correct pipe numbers

The system identifies the two items welded, using the stated length and heat number to verify pipe identification. This ensures early detection of incorrect numbers, and highlights use of suspect material or duplicate pipe numbers.

Incorporating all the hurdles

The system monitors the results of the various examinations, combing all of these to ensure that only welds that have passed all essential examinations are accepted.

No problems with positives + negatives

The system makes no distinction on the order that welds are recorded (i.e. they might not be welded in order). It also makes no distinction between a weld joining A to B and a weld joining B to A. Enter the welds in any order and enter the items either way round, and the system will cope. Naturally the reports can be from start to finish or from finish to start or for any portion in between. The system caters for any portion of the line being welded in reverse direction.

Full weld history

The system maintains a full weld history for every weld, assisting in the process of identifying the cause of defective welds. Every repair can be recorded and every cut-out too. The system can cope with any number of repairs and re-welds to a weld, even if the fabricators cannot.

This is what you need…a flexible system which enables management by exception

Overview

Lone Star (PTS) provides the link between welding and NDT, ensuring that the status of each weld is updated automatically by NDT personnel and that they are always aware of the welds requiring examination.

Quick and easy data recording
The exam type, exam procedure and technique types are all selected from pre-defined drop down lists.

Tracking the problems
The system can record up to three defects per weld, providing the means to track trends and identifying fatal and marginal defects.

Monitoring the trends
Defects are selected from a list of typical defects, increasing the speed of data entry, as well as enforcing data consistency.

Passing or failing welds
The combined result of all the examinations determines the overall status of the weld.

Exam completion process - The system identifies the NDT requirement for each weld, helping to identify the examinations still required before the weld can be accepted.

This is what you need… Building by design

Overview
Lone Star (PTS) is designed to take into account the high production rates that can be achieved on pipeline projects, resulting in large amounts of data being recorded and verified on a continuous basis throughout the shifts. To assistant in this process, the system records design information that can be specified before fabrication begins and can be used to confirm the fabrication information entered.

Define the design
Each pipeline can be split into segments (termed “stalk” or “section”). The system records the drawing numbers and design length for each stalk. It can also record the designated weld numbers to be used, where applicable.

Identification at transition points
A list of pipe sizes and grades is maintained on the system, and similarly, a list of factory coatings. The system will alert the user when dissimilar items are welded together (can happen but never unknowingly).

Correct specification down the line - For each position in the pipeline, it is possible to specify the item type (such as flange, tee or pipe), the pipe size and grade, the factory coating type and thickness, and whether an anode pipe is required or not.

Regards,

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