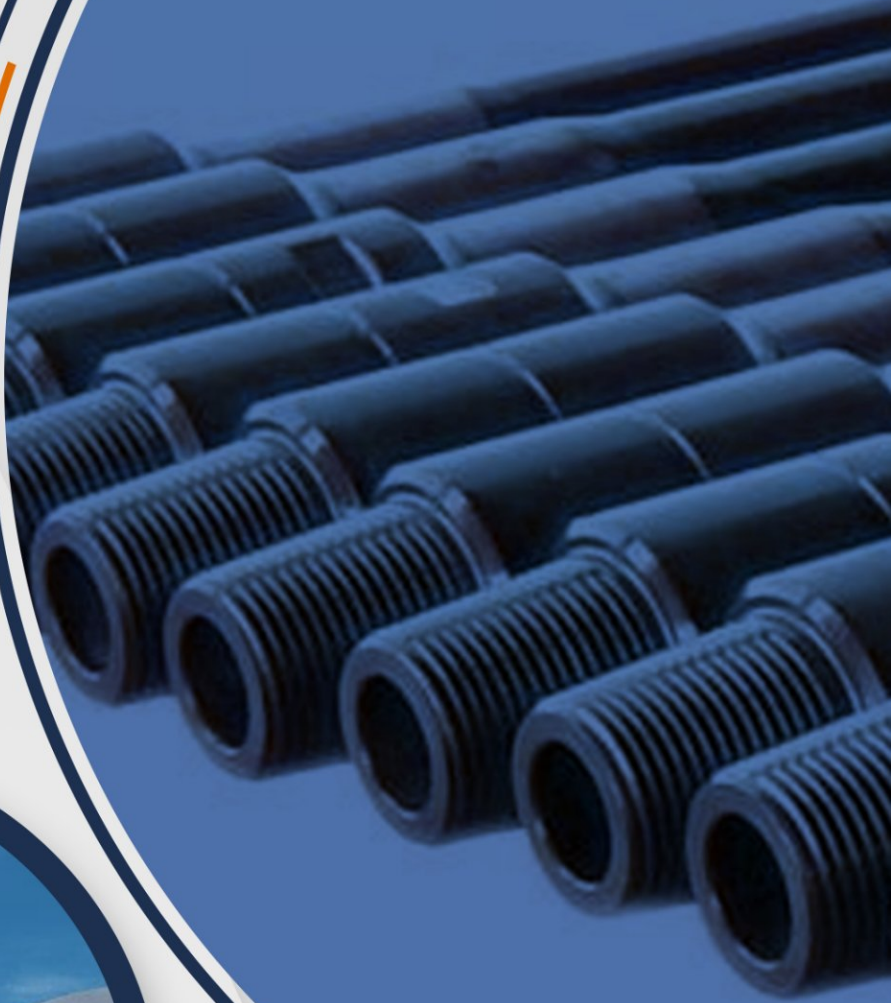


# NDT INSPECTION SERVICES



**NDT INSPECTION PROJECTS MANAGEMENT.**

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**TUBULARS, BHA COMPONENTS, TUBULAR HOISTING AND  
HANDLING TOOLS, LIFTING GEAR NDT INSPECTION SERVICES.**

## About us

**OUMARCO NDT INSPECTION SERVICES** is a department of OUMARCO Sarlu which specializes in various Inspection and Non-Destructive testing services and projects in the oil and gas industry.

**OUMARCO NDT INSPECTION SERVICES** has a team of inspectors whose qualifications and certifications are in accordance with **SNT-TC-1A, ISO9712, ISO17024, ANSI/ASNT, CP-106, API RP7G, RP5A5** and **OUMARCO NDT INSPECTION SERVICES** written practice.

## Why the use of Non-Destructive Testing Inspection in the oil and gas industry

Drilling is a difficult activity, and the drill stem is subjected to a lot of pressure, as it goes deep into the ground. Drill pipe inspectors closely examine each piece of equipment to check for defects, cracks or corrosion. Thanks to their watchful eye, drilling operations can continue to be carried out safely.

On drilling rigs, the drill pipe used is subjected to cyclical stresses in the form of tension, compression, torsion and bending, so its inspection is essential for detecting defects related to manufacturing, handling or drilling. Drill pipe and tube pipe inspectors find defects

like corrosion, cracking, third-party damage, or manufacturing defects before those defects cause serious damage.

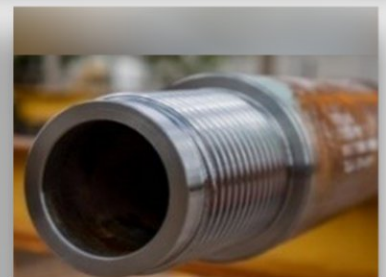
Oumarco NDT Inspectors use specialized mechanical or electronic equipment, such as ultrasonic inspection (**UT**), electromagnetic inspection (**EMI**) and magnetic particle inspection (**MPI**), to find faults that absolutely must be found to prevent failures. in the well.

## • Our NDT Inspection Services

**OUMARCO NDT INSPECTION SERVICES** offers any of the below inspection services in accordance with relevant international oil and gas related industry standards such as **API, DS-1, NS-2** and and customer defined requirements.



Wash out



API thread in good condition



Fractured API Thread



Crack ( fatigue crack)

## • Visual Thread Inspection (API and non-API)

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Visual inspection is always performed as the first step in any NDT inspection. Visual inspection requires direct line of sight contact with the portion of the test object to be inspected and also an adequate illumination of the test object as well as a thorough understanding of the nature and origin of potential defects within the test object. The inspector must have also detailed knowledge of the specifications controlling the inspection process in order to properly perform visual testing.



### Minimum tools required

- Flashlight
- 12-inch metal rule
- Magnifying Mirror
- Load bearing profile threads gauge

## • Liquid-Dye Penetrant Inspection (PT)

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Dye Penetrant Inspection (PT) is a Non-Destructive Testing technique in which the inspector uses a penetrating fluid to locate any defects which have an open connection to the surface. This can be done in daylight conditions with red penetrant or in a darkened room under ultraviolet light with fluorescent penetrant for a higher sensitivity.



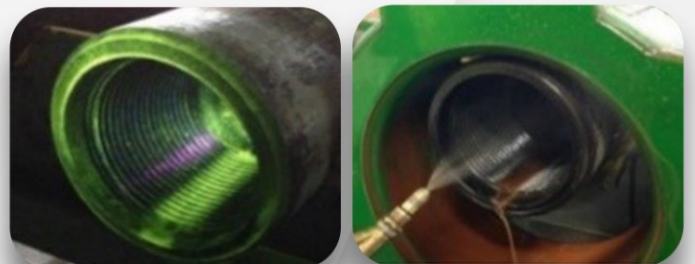
### Equipment and Material required

- Penetrant Materials
- Developer Materials
- Cleaner Materials
- Magnifying Mirror
- Flashlight

## • Magnetic Particle Inspection (MT)

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Magnetic Particle Inspection (MT) is a Non-Destructive Inspection method through which the inspector can locate surface-breaking and sub surface defects in ferromagnetic materials. A magnetic field is applied, creating a flux leakage at the location of any defects. Iron oxide particles are then applied to the inspection surface, either in dry form or in a wet suspension. The flux leakage field



will attract the iron particles, forming an indication on top of the surface material. This indication is then evaluated in accordance with required standards

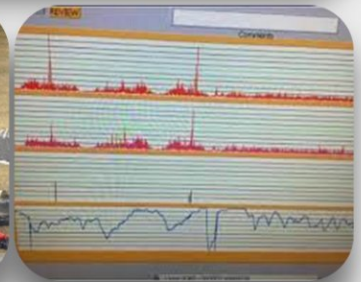
Equipment and Material required

An object can be magnetized with several methods:

- Bobine
- AC Yoke
- UV-A Light
- Direct Current /AC Current flow

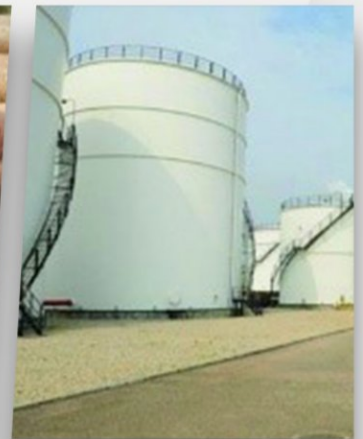
## • Electro-Magnetic Inspection (EMI)

This procedure covers upset to upset scanning of steel drill pipe tube for transverse flaws using flux leakage detection equipment. Pipe with imperfection exceeding the specified limits of the acceptance criteria shall be rejected.



## • Ultrasonic Wall Thickness Inspection (UT)

Ultrasonic Testing (UT) is a Non-Destructive Testing technique in which the examiner uses ultrasonic sound waves to detect internal imperfections in homogeneous materials, such as welded structural components, castings and forgings. In addition, the wall thickness of the material under test can be measured with great accuracy.



## • Dimensional Threads Inspection (DTI)

Dimensional Threads Inspections describes the Dimensional Inspection of used and brand new API connections on tubular equipment such as: **Drill Collars, Heavy Weight Drill Pipe, Drill Pipe and BHA** components. The results of measurements need to match the standards given in the specification such as : **API, DS-1, NS-2**



• **Tubular Goods Management Services (TMS)**



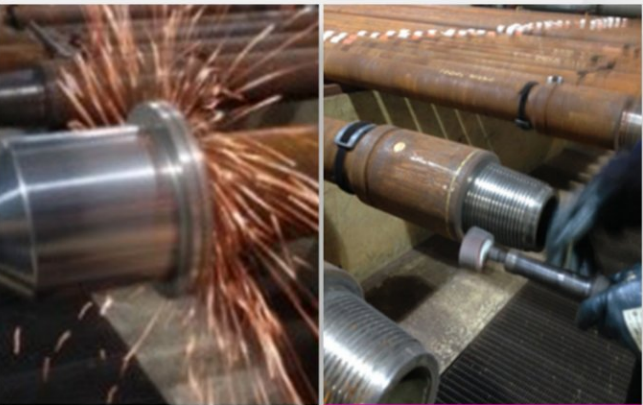
With Tubular Goods Management, OUMARCO NDT Inspection Services offer a total management of the tubulars yard(s). This includes inspection and maintenance of tubulars received into stock, during the stocking period and shipments to the well site locations. Well site return of tubulars also included.

• **On-site and Shop NDT Inspection**



OUMARCO NDT Inspection Services, also offers NDT inspections at customer’s facility as well as on remote land. Our BHA inspection Kit can be transported to remote land or offshore locations under customer’s call out. Minor threads and shoulder damage can also be repaired on site.

• **On-site repair and reface of API Rotary Shouldered Connections**

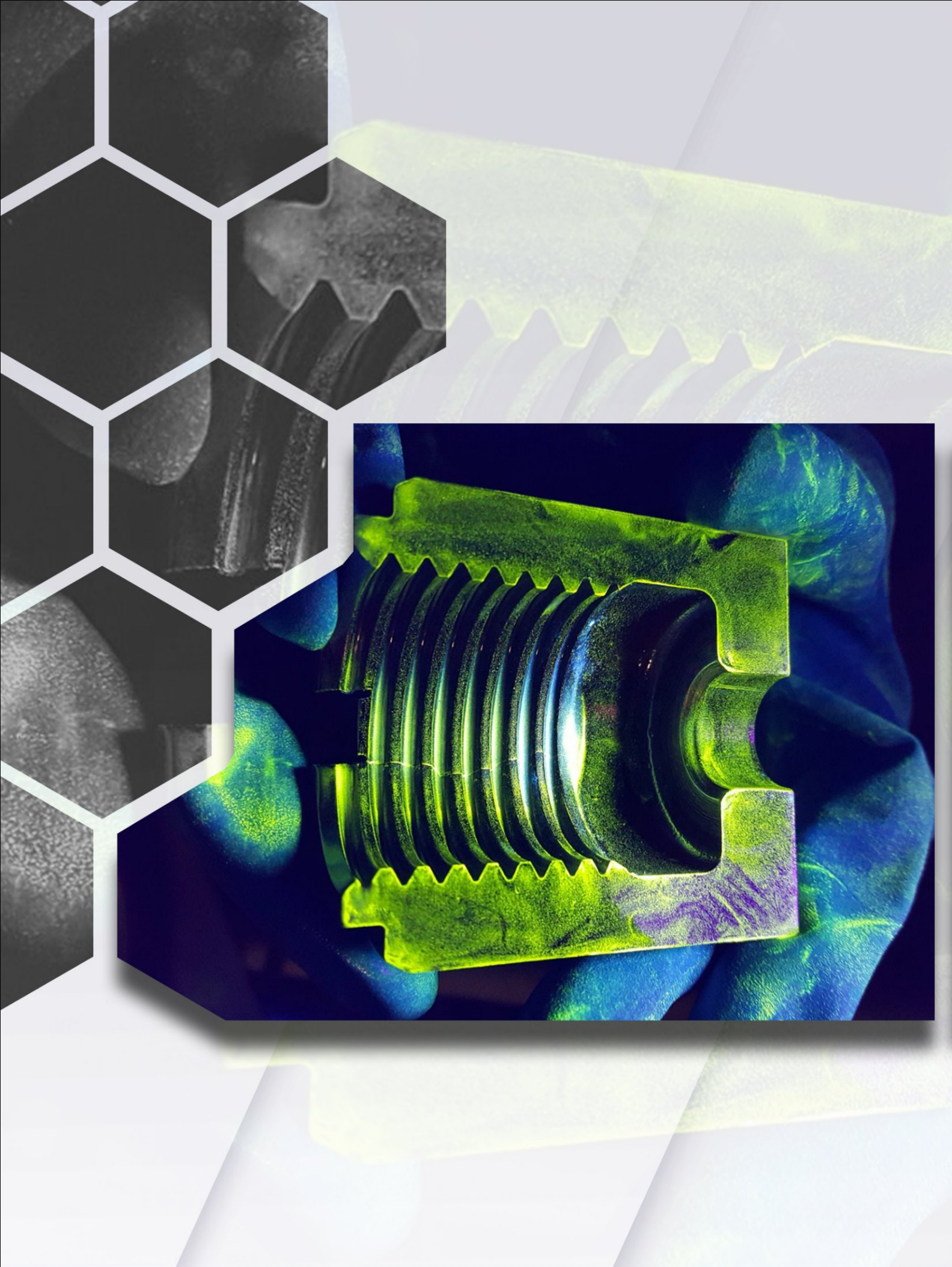


Reface of a damaged rotary shouldered connection shoulder is done with a special shoulder dressing tool. There are several types available on the market, but the same principle applies to all of them. A refaced shoulder should be flat and at right angles to the threads.

• **Data Management of Inspection Report**

| T.V. Work Order No.: 03874-ALX-2012  |         | Drill Pipe Inspection Report |        |        |                         |        | Date of Inspection: 2/11/2012  |          |        |
|--|---------|------------------------------|--------|--------|-------------------------|--------|--------------------------------|----------|--------|
| Customer: PRIDE NORTH AMERICA  |         | Tully Street 22 - OK 28      |        |        |                         |        | Inspection Report No.: 0351403 |          |        |
| Location: NOV TUBESCOPE ALEX YARD3   |         |                              |        |        |                         |        | Customer W.O. No.: 7143332LS   |          |        |
| Inspection Method: Eddy, Ultrasonic, Visual, etc.                                      |         |                              |        |        |                         |        |                                |          |        |
| Inspection Used: Eddy, Ultrasonic, Visual, etc.  |         |                              |        |        |                         |        |                                |          |        |
| Order: 0128 Range: 1 Weight: 24.728 Max. ID: 5.12' ID: 4' Thread OD: 3.75' Core: 1.915 |         |                              |        |        |                         |        |                                |          |        |
| Inspection Results:  |         | Box or Upper Connection      |        |        | Pin or Lower Connection |        |                                | Pip Body |        |
| Depth  | Defect  | Defect                       | Defect | Defect | Defect                  | Defect | Defect                         | Defect   | Defect |
| 21   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 22   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 23   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 24   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 25   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 26   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 27   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 28   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 29   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 30   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 31   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 32   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 33   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 34   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 35   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 36   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 37   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 38   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 39   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |
| 40   | Surface | OK                           | OK     | OK     | OK                      | OK     | OK                             | OK       | OK     |

Adequate reporting and data management is essential for the transmission of relevant and correct information to customer; Every inspection operation is to be finalized with a documentation of the service/inspection; the inspection report.



# OIL COUNTRY TUBULAR GOODS INSPECTION

Oil Country Tubular Goods and Tool joints inspections are carried out as per latest edition of **DS-1 Vol.3** and API standard recommended categories and procedures using highly efficient and advance tools and equipment. Our team of inspectors is fully professional, certified, experienced and well trained with all inspection standards.

## Types of Inspection:

1. Visual Connection Inspection
2. Visual Tube Inspection
3. OD Gauging Full Length
4. UT Wall thickness measurement of Tube
5. Electromagnetic Scanning of tube body
6. Magnetic Particle Inspection of Slip/upset Area
7. Ultrasonic Inspection of Slip/upset Area
8. Black light Inspection of connection
9. Heat Checking Inspection
10. Thread Profile Gauging



# BOTTOM HOLE ASSEMBLY (BHA) AND SPECIALITY TOOLS INSPECTION

Bottom Hole Assembly (BHA) and Specialty Tools i.e. Drill Collar, Heavy Weight Drill Pipe (HWDP), Directional drilling Mud Motor, Drilling Jar, Under reamers, Hole Openers, Roller reamers, IBOPs, Surface Safety Valves, Kelly Valves, Stabilizer, Fishing Tools, MWD/LWD Tools and Sub tools inspections are carried out as per latest editions of DS-1 and API standard recommended categories, procedures and client recommended procedures using the latest tools and equipment by the team of well trained and experienced inspectors.



## Types of Inspection:

1. Visual Connection Inspection
2. Black light Connection Inspection
3. Thread Profile Gauging

4. Dimensional Inspection
5. Visual Body Inspection
6. Magnetic Particle Inspection.
7. Liquid Dye Penetrant Inspection
8. Heat Checking Inspection (HWDP Only)
9. Ultrasonic Flaw Detection of Connections
10. Slip Groove Inspection



## CASING AND TUBING INSPECTION

We are providing specialized inspection services for casing and tubing according to the procedure of **API-5CT, API-5A5, 5B1** and other specific procedures provided by the clients.

### Types of Inspection:

1. Visual Threads Inspection
2. API Full Length Drift Testing
3. Thread Profile gauging
4. Ultrasonic Wall Thickness Measurements
5. Visual Tube Inspection



## LIFTING GEAR INSPECTION

OUMARCO NDT Inspector provides NDT Inspection and certification for your lifting equipment and accessories.

- Wire Rope Slings
- Chain and Chain Slings
- Webbing Slings
- Shackle
- Hooks



- Fork Lift
- Turn Buckles
- Safety Harness
- Swivels
- Air Winches
- Load Testing
- And Other Related Accessories



## TUBULARS HOISTING AND HANDLING TOOLS INSPECTION

Hoisting and handling tools **CAT-III** and **CAT-IV** inspections are carried out according to the API standards **API RP-8B** and **API RP-7L** along with **OEM** applicable specifications.

### Types of inspection :

- Slips and Elevators
- Top Drive System (TDS)
- Draw Works
- Crown Block
- Traveling Block and Hook
- Dead Line Anchor
- Rotary Table
- Manual and Power Tongs
- Inserts
- Safety Clamps
- Links
- Iron Rough Neck





## RIG MAST AND SUBSTRUCTURE INSPECTION

OUMARCO NDT Inspection Services provides NDT inspection of Rig mast and Sub Structure according to API **RP 4G CAT-III and CAT-IV** along with **OEM** applicable specifications in order to maintain the serviceability of drilling and well servicing structures.

### Type of inspection :


- Rig Mast/Derricks and Accessories





## Contact us

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