



REFURBISHMENT

Beam Pumping Unit



INTRODUCTION

Maximize the value of your existing assets with our expert refurbishment services for pumping units. Our approach revitalizes your equipment, enhancing performance, extending operational life, and ensuring peak reliability—without the cost of brand-new replacements. Through precision reconditioning and upgrades, we minimize downtime and deliver optimal efficiency tailored to your operational needs. Refurbishment isn't just a smart investment; it's a sustainable choice that reduces costs, improves safety, and lowers your carbon footprint, all while backed by our 24/7 customer support. Keep your operations running smoothly with equipment that performs like new, for less.

ADVANTAGES

Performance warranty

Reliable performance
guaranteed satisfaction

Cost savings

< 75 Days for
refurbishment processing

up to 50% cost reduction
with same warranty as
brand new

Enhance safety

Refurbishment concerns to
safety standards (API, ISO
and Regulations)



Extend equipment life

- Up to 2 years warranty
- High durability
- High reliability

Carbon Print Reduction

Refurbishing a pumping unit
rather than replacing it entirely
can be more environmentally
friendly. Up to 75%

Customer Service

24 hours for customer service



EXPERIENCES

Bukaka has **over 30 years** of experience in refurbishing Beam Pumping Units

Refurbishment of Beam Pumping Unit

Bukaka has completed **more than 1,500** Beam Pumping Unit refurbishments.



BEFORE
(Junk of Pumping Unit)



AFTER
(New Pumping Unit)

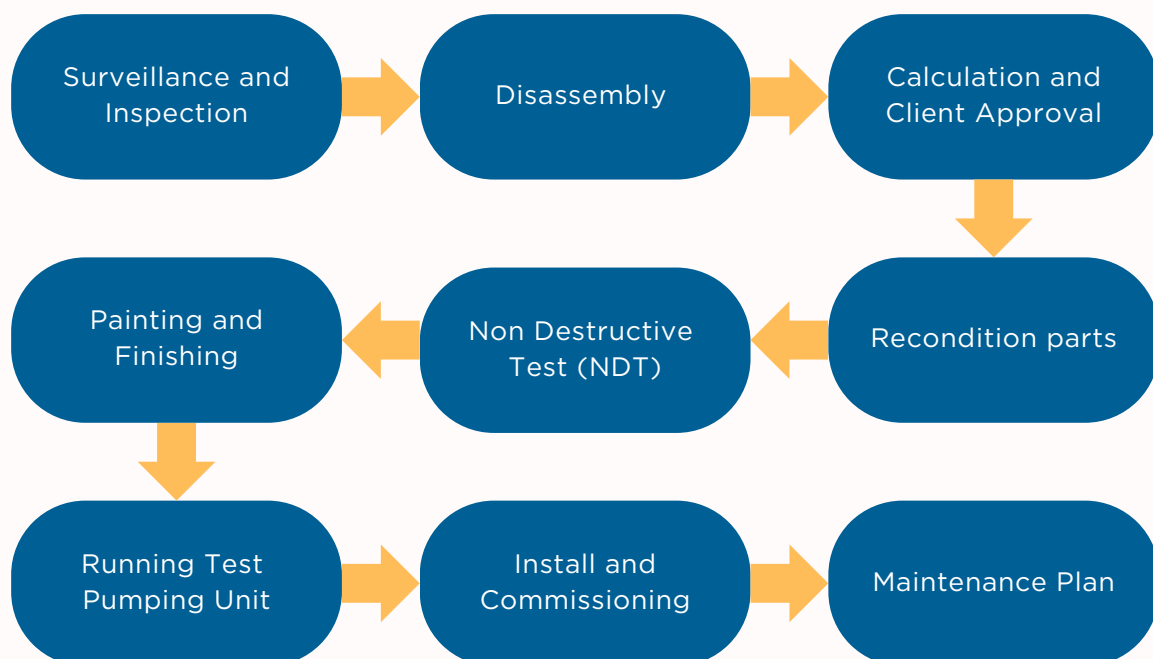
FACILITIES



REFURBISHMENT PROCEDURE

The refurbishment process begins with surveillance and inspection to assess the condition of the equipment, followed by disassembly to enable detailed examination. After thorough evaluation, a calculation and client approval phase ensures that all necessary repairs and costs are agreed upon. Key components undergo non-destructive testing (NDT) and reconditioning to restore functionality.

Once repaired, parts are reassembled with precision, and painting and finishing are applied to ensure durability. The unit then undergoes a running test to verify performance before installation and commissioning. Finally, a maintenance plan is provided to ensure optimal long-term operation and reliability.



SURVEILLANCE AND INSPECTION

The surveillance and inspection phase is the first step in the refurbishment process, focusing on a detailed assessment of the pumping unit's current condition. This step involves visual inspections, functional testing, and data collection to identify wear, damage, or potential failures in components.

Specialized tools and diagnostic equipment may be used to ensure a thorough evaluation. The insights gathered during this phase form the basis for repair recommendations, part replacements, and the overall refurbishment strategy, ensuring that all issues are addressed efficiently and cost-effectively.

- Inspect the entire pumping unit to identify any visible damage or worn-out components.
- Check the motor, gearbox and structural components for corrosion, leaks, or cracks.
- Record observations and create a checklist of items that need repair or replacement



DISASSEMBLY

The disassembly phase involves carefully dismantling the pumping unit to gain full access to individual components for thorough inspection and repair. This process ensures that all parts—such as motors, gears, seals, and bearings—are separated without causing damage, preserving the integrity of reusable elements.

Proper labeling and documentation during disassembly are essential to streamline the reassembly process later. This step allows for a deeper analysis of hidden issues and paves the way for effective reconditioning and testing in subsequent phases

- Disassemble the pumping unit systematically, following manufacturer guidelines if available.
- Label and organize removed parts for easier reassembly

Required heavy equipment and tools for dismantling

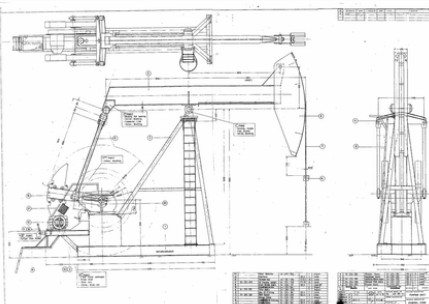
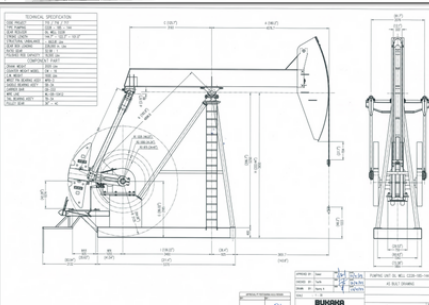
- Crane with minimum capacity 100 ton
- Trailer 40 ft
- Sling wire
- Webbing sling
- Eagle clamp
- Rope
- Wrench
- Torque wrench
- Toolkit



CALCULATION AND CLIENT APPROVAL

In the calculation and client approval phase, a detailed analysis of the refurbishment scope is conducted. This includes estimating the costs of repairs, replacement parts, and any additional services required.

| Conventional Beam Pumping Unit Calculation Form | | | |
|---|---|---------------|-----------------|
| Company Name : | | Prepared By : | |
| Well Name : | | Checked By : | |
| Location : | | Approved By : | |
| Country : | | Date : | |
| Pumping Unit Data | | | |
| Brand | | | |
| Type of Beam Pumping Unit | | | |
| Gear Reducer Rating | = | 160,000 | in.lb 18,078 Nm |
| Structure Capacity | = | 17900 | lb 76,954 N |
| Max. Stroke Length | = | 100 | in 2,540 mm |
| API Linkage Dimensions | | | |
| | | | |
| A | = | 2,818,0 | mm |
| C | = | 2,360,0 | mm |
| H | = | 5,567,0 | mm |
| G | = | 2,500,0 | mm |
| I | = | 2,438,0 | mm |
| P | = | 3,010,0 | mm |

RECONDITION PARTS

The recondition parts phase focuses on restoring the key components of the pumping unit to optimal working condition. This process may involve cleaning, repairing, machining, or replacing worn-out elements such as bearings, shafts, and other components.

- Thoroughly clean all parts using appropriate cleaning agents to remove dirt, oil, and debris.
- Inspect each component closely for wear, corrosion, or damage.
- Measure critical dimensions to ensure parts meet specifications.
- Repair or replace damaged or worn-out components such as seals, bearings, and gaskets.
- If necessary, rebuild the motor and gearbox or replace them with new ones.
- Welding or machining may be required for structural repairs; ensure proper techniques and safety measures are followed

WELDING



CLEANING



PAINTING



Gear Reducer Base



Samson Post



Walking Beam



NON DESTRUCTIVE TEST (NDT)

The Non-Destructive Test (NDT) phase is a step for evaluating the quality of key components without causing any damage. NDT ensures that all reconditioned parts meet safety and performance standards before reassembly. This phase helps prevent unexpected failures, ensuring the reliability and longevity of the pumping unit throughout its operational life.



FACTORY ASSESSMENT TEST

The Factory Assessment Test (FAT) is a crucial step to verify the performance and functionality of the refurbished pumping unit under controlled conditions before it is deployed back into service. This test simulates real operational scenarios to ensure the equipment meets all technical specifications, safety standards, and client expectations.



INSTALLATION



OUR PACKAGES

| DESCRIPTION | MINOR | MEDIUM | MAJOR |
|-------------------------------|-------|--------|-------|
| Blasting & Painting All Items | ✓ | ✓ | ✓ |
| Ladder Assy. | ✓ | ✓ | ✓ |
| Wireline & Carrier Bar Assy. | ✓ | ✓ | ✓ |
| Rachet Brake Handle Assy. | ✓ | ✓ | ✓ |
| Drum Brake Assy. | ✓ | ✓ | ✓ |
| Pulley & V-Belt Assy. | ✓ | ✓ | ✓ |
| Belt Guard Assy. | ✓ | ✓ | ✓ |
| Lubricant System | ✓ | ✓ | ✓ |
| Counterweight *) | ✓ | ✓ | ✓ |
| Wristpin Bearing Assy. | ✗ | ✓ | ✓ |
| Saddle Bearing Assy. | ✗ | ✓ | ✓ |
| Tail Bearing Assy. | ✗ | ✓ | ✓ |
| Equalizer & Pitman Assy. | ✗ | ✓ | ✓ |
| Frame Extension Assy. | ✗ | ✓ | ✓ |
| Horse Head Assy. | ✗ | ✓ | ✓ |
| Frame Base Assy. | ✗ | ✗ | ✓ |
| Gear Reducer Assy. | ✗ | ✗ | ✓ |
| Crank Assy. | ✗ | ✗ | ✓ |
| Walking Beam Assy. | ✗ | ✗ | ✓ |
| Samson Post Assy. | ✗ | ✗ | ✓ |

*) only for blasting & painting



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