

The **Legacy** Continues.



LEECMOORE™

A Woolslayer Company

LEE C. MOORE CORP.



The **Legacy** Continues.

The brand of Lee C. Moore, A Woolslayer Company is firmly rooted in the legacy of innovation.

Equipment manufactured by Lee C. Moore is on the job for virtually every major drilling company and is used throughout the world in every conceivable drilling condition, both onshore and offshore.

Lee C. Moore, A Woolslayer Company, traces its heritage to 1907 and the legendary Lee C. Moore Corporation. In 1936, H.J. Woolslayer, an innovator in the design and engineering of oilfield equipment, became its sole owner.

First displayed in 1938, Lee C. Moore revolutionized the petroleum industry when it **designed and built the first Cantilever mast**. To date the company has manufactured over 4,000 Cantilever Masts.

Lee C. Moore became the **leading designer and manufacturer** of drilling structures under the direction of Homer Woolslayer with shops in Pittsburgh and Tulsa. On H.J. Woolslayer's passing, ownership was earned by his son J.R. Woolslayer, who had over 20 years experience with the company as head of sales. J.R. (Bob) Woolslayer remained President of the company from the middle 1980s into the 21st century.

In 1990, the company changed its name to Woolslayer Companies, Inc. to reflect the Woolslayer family leadership. In April 2010, the company announced the rebirth of the legacy name. The company is now known throughout every corner of the globe as **Lee C. Moore, A Woolslayer Company**.



THE NEXT xSTM™ MAST RAISING MECHANISM IS JUST ONE OF THE MANY CURRENT PATENTS SUPPORTING THE INNOVATIVE LEE C. MOORE SPIRIT.

DERRICKS

Lee C. Moore derricks feature greater setback capacities, increased visibility for the driller, lighter weight, and efficient designs. Derricks are custom engineered to meet owner specifications and equipment requirements with hook-load capacities up to 2.5 million pounds. ABS/DNV certification is available upon request. Lee C. Moore derricks are designed and manufactured in accordance with API 4F standards.

Standard Derricks

Lee C. Moore supplies a range of standard derricks for use on fixed platforms and jack-ups.

Dynamic Derricks

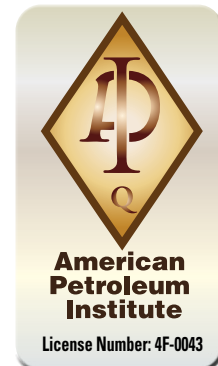
Lee C. Moore dynamic derricks are designed to resist the hull motion of semi-submersibles, drillships, and jack-ups under tow. Dynamic derricks are also provided to resist seismic-induced loads on offshore platforms.

Designs

- Straight
- Tapered
- Offset
- Double Offset
- Dual Derricks

Applications

- Fixed platforms
- Jack-ups
- Semi-submersibles
- Tension leg
- Drillships
- Windmill





LEE C. MOORE HAS
PRODUCED OVER 650
DERRICKS TO MORE
THAN 100 CUSTOMERS
WORLDWIDE.



MASTS & SUBSTRUCTURES

Lee C. Moore designs and manufactures a variety of masts and substructures for onshore and offshore applications. Each is built to demanding API 4F standards and customer specifications. Many of Lee C. Moore's masts and substructures are still in use after 30, 40, and even 50 years after being put into service.

Many have been used to drill conventional wells to depths in excess of 30,000 feet. Permanent records are maintained on each mast. As a result, Lee C. Moore is able to supply technical information, furnish replacement parts, and provide expert field service whenever and wherever it is needed.

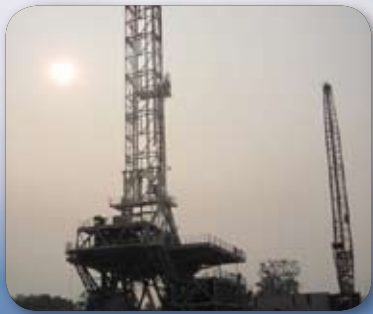
HMR Highly Mobile Rig™

Lee C. Moore's HMR is designed to facilitate faster rig moves. The time required for rig-up and rig-down is reduced by simplifying and minimizing the steps required for moves.

The mast is moved in two sections, each with its own transport dolly. The substructure is separated into three modules for transport.

The mast raises and lowers using hydraulic cylinders. The substructure is raised to drill-floor elevation utilizing the same hydraulic cylinders and the same base connections used to raise the mast. For safety and efficiency the cylinders remain in compression during the raising and lowering of the mast and substructure.





LEE C. MOORE DESIGNS AND
FABRICATES SPECIAL APPLICATION
MASTS TO FIT ANY NEED.



Hi-Floor Masts

The **Lee C. Moore Hi-Floor Mast** design utilizes a special cantilever that carries its own floor. The Hi-Floor Mast design provides clearance beneath the rotary beams for various wellhead and BOP configurations. The Hi-Floor Mast eliminates the box-on-box substructure in favor of fewer and lighter transportation loads.



Cantilever Masts

Introduced more than 60 years ago by Lee C. Moore Corporation, the **Cantilever Mast** is designed to be installed on a box-on-box substructure or elevated/raised substructures.

Butterfly Masts

- Minimizes height and width of transportation loads
- Utilizes hydraulic cylinders to open and close the mast
- Saves time and money by reducing handling

Featuring patented folding sections, the **Lee C. Moore Butterfly Mast** is specially designed to fold sections for highway transportation. The Butterfly Mast is available with static hook load capacity in excess of 1 million pounds.



xS Masts™

The **Lee C. Moore xS Mast™ (Extension by Section)** features mast sections inserted into the bottom section or superstructure of the mast and hydraulically raised to a working position. The xS Mast™ is ideal for deep-well platform drilling applications or mountainous terrain where rig-up space is limited.

Folding Masts

Lee C. Moore Folding Masts are available in either the 142 ft. or 160 ft. heights and designed for use on tender-assisted platforms configured for use with a standard derrick. The folded mast is installed and removed from a platform in one piece eliminating the need of building and dismantling a standard derrick.



Box-on-Box Drilling Structures

Lee C. Moore continues to lead the industry in the design and fabrication of traditional style box-on-box substructures to meet the industry's newest standards with taller clear heights and wider bases.



HMR 2000 Substructure

Hydraulically Raised Substructure designed with the following features:

- Assembles at ground elevation and raises to floor height using raising cylinders with no requirement for relocating the base connection
- Hydraulic raising cylinders remain in compression during raising and lowering operations
- Integrated rotary skid to accommodate an independent rotary table
- Accommodates rotating mousehole, iron roughneck, hydraulic catwalk and other specified automated accessories
- Setback spreader covered with flat plate and 6 inch wood
- Floor mounted pedestal accommodates iron roughneck





LEECMOORE™

A Woolslayer Company

RIG MOVING SYSTEMS

Lee C. Moore Rig Moving Systems

- Rig Rover®
- Jacking Claw Skidding System
- Mast Transportation Dollies
- Substructure Transportation Dollies
- Roller Cam Rig Mover

Land Rig Movers

Lee C. Moore Land Rig Movers are the practical, efficient solution to the costly and time-consuming task of rigging-up and tearing down a land drilling rig. With Lee C. Moore, moving a rig from one drilling site to the next can be done in less time and significantly reduce expense.

Using a rig mover eliminates the need for cranes and trucks to handle individual rig components, one of the most common causes of rig damage. Lee C. Moore rig movers include dollies, tires, load dividers, and goosenecks, designed specifically for your rig moving requirements.

Lee C. Moore land rig movers are designed for use in harsh environmental conditions, whether in subfreezing temperatures of Alaska's North Slope or in the searing heat of the Sahara Desert.



Rig Rover®



Self Tracking/Steerable Dollies

Rig Rover® Rig Moving System

- Provides versatility for multi-well locations
- Can be shared with other rigs
- Moves mast and substructure with full setback forward or backward on any 90° or 45° axis
- Reduces rig move time and expense



Reversible Jacking Claw Skidding System

- Increases floor height while providing X-Y skidding
- Moves rig structure to each well without dismantling
- Skids forward and reverse without relocating the jacking cylinders
- Well suited to offshore or land



LEE C. MOORE RIG ROVER®
IS THE PRACTICAL, EFFICIENT SOLUTION
FOR MULTI-WELL PAD DRILLING.



LEECMOORE™

A Woolslayer Company

BOP HANDLING SYSTEMS

Lee C. Moore blowout preventer handling systems are supplied with safe working load ratings of 20 tons or more. The system includes two individual low-headroom hoists, each with a safe working load rating of half the system rating, and trolleys. A lift of 10 ft. is normally provided.

BOP Hoists

The double-acting hydraulic lifting cylinders of each hoist will raise and lower the BOP stack with the rod always in compression. Each cylinder is fitted with an integral holding valve to prevent the BOP from dropping, even in the event of hose failure. Included are 50 ft. long supply hoses and quick-disconnects.

The cylinders are proof-tested at 1.5 times their rated load capacity. The hoist's lifting line has a minimum 4:1 factor of safety based on the breaking strength of the wire rope.

- Includes hydraulic cylinder hoists with 10 ft. lift and geared-type trolleys and hoisting line
- Includes enclosed console with directional control valve and pressure gauges for each cylinder
- Includes mounting plate and outlets for connection to the explosion proof HPU
- Includes two BOP trolley beams and a BOP handling cradle
- Includes either manual or hydraulic powered drive trolleys
- Available transportation skid for the BOP hydraulic hoists
- Available adjustable BOP transportation and test skid system designed to accommodate the BOP stack



LEE C. MOORE 100 TON
BOP HANDLING SYSTEM
LIFTING A 13-5/8" X
10,000 PSI STACK.

HOISTING EQUIPMENT

Manufactured under its API 8C license, **Lee C. Moore Sheaves** are fabricated from rolled steel plate and forged steel. This method of manufacturing eliminates the imperfections often found in steel castings. Sheave grooves are machined for specific wireline diameters and are flame hardened to resist wear.

Sheaves

Lee C. Moore sheaves are designed to accommodate various shaft diameters which are drilled and tapped for centralized greasing of individual sheaves. Sheaves are mounted on tapered roller bearings or with bronze bushings. Available in diameters from 24 to 80 inches.



Crown Blocks

Lee C. Moore designs and manufactures standard and custom crown blocks for masts and derricks to meet the API 8C specification. Mast-type crowns are designed in either standard or skewed configuration. Both can accommodate air hoist sheaves, coreline sheaves, and other accessories as specified by customers.

Skewed-Type Crown Blocks

Originally developed and patented by Lee C. Moore, the skewed-type crown block presents the flat side of the traveling block to the racking platform allowing the derrickman to reach the elevators with greater ease. The fastline sheave is positioned independently of the sheave cluster, which optimizes the drum fleet angle, ensures proper spooling of the drill line on the drawworks drum, and minimizes line wear.

Lee C. Moore crown blocks are also designed and built with additional sheaves to position the deadline or fastline inside or outside the derrick. These crown block features eliminate

drill line interference with special derrick accessories such as automatic pipe handling systems, power swivels, and motion compensators.

Traveling Blocks

Lee C. Moore offers traveling blocks from 150 tons to 1,000 tons. Hang-off lines are also available.



Deadline Anchors

Designed and manufactured to API 8C specifications, Lee C. Moore deadline anchors are available in pedestal and leg-mounted configurations. Rotating drum models are available to facilitate slipping drill line.

These high-quality anchors range from 30,000 lbs. to 200,000 lbs. pull-line capacity.

Lee C. Moore deadline anchors are furnished with load cells and anchor bolt patterns interchangeable with oilfield standards. Other pedestal Lee C. Moore anchors are available for use as breakovers for raising and lowering masts.



A FULL LINE OF HIGH-QUALITY SHEAVES AND BLOCKS ARE AVAILABLE FROM LEE C. MOORE.



LEECMOORE™

A Woolslayer Company

CASING STABBING PLATFORMS

Lee C. Moore provides air, hydraulic and electric powered adjustable casing stabbing platform units. Work platforms are adjustable from 23 ft. to 47 ft. elevations above the drill floor. The platforms are mounted on cam rollers and designed to fold against the track for storage and transport. The Lee C. Moore casing stabbing platform is designed, fabricated, and tested in accordance with API Standard Q1 quality and can be ABS/DNV/UL certified.

Each unit includes the following:

- Air, hydraulic, or electric powered
- UL Classified hoist
- Primary load brake and deadman type controls
- Two dynamic safety brakes
- Derrickman's belt
- Derrickman's harness with shoulder straps
- Safety line with attachment padeye
- Safety screen on backside of riding platform
- Guide track and mounting brackets





LEECMOORE™

A Woolslayer Company

MODIFICATIONS & UPGRADES

- Modification of Masts and Derricks to accommodate Guide Tracks for Top Drive systems
- Reinforcement kits for increased hook capacity and setback capacity
- Extensions for increase height necessary to accommodate Top Drive Systems
- BOP Handling Systems
- Rig Moving Systems
- Pony Subs to raise height of drill floor
- Top Drive Parking System – Lee C. Moore “SideTracker”
- Modification of Derricks to accommodate Automated Pipe Handling Systems
- Modification of Masts to accommodate Independent Rotary Tables
- Modification of Masts and Derricks to accommodate various pipehandling integration

LEE C. MOORE TRAINING SEMINARS

Drilling Structure Design, Inspection, Maintenance & Repair

- Design concepts of drilling structures
- Terminology and nomenclature of drilling structures and accessories
- Principles of raising and lowering masts
- How to recognize and identify critical damages and conditions
- How to complete API RP 4G inspection forms
- Maintenance for drilling structures
- Maintenance for crown blocks and traveling blocks
- Welding procedures and inspection techniques



OTHER AVAILABLE LEE C. MOORE TRAINING SEMINARS

- HMR Operation & Maintenance
- Understanding API 4F
- Welding & Repair of Drilling Structures



LEECMOORE™

A Woolslayer Company

FIELD SERVICES

Lee C. Moore offers worldwide field services for all makes and models of drilling structures. Our team of service professionals specialize in API RP 4G Category III and IV inspections, recertification, emergency repairs, upgrades and equipment installation.

Lee C. Moore field service is backed by decades of experience and fully supported by our engineering department. Lee C. Moore develops and maintains procedures for repair and maintenance of all structural components and related accessories found on all drilling rigs of yesterday and today.



Our service technicians are highly trained and experienced.

- Supervision and inspection by AWS Certified Welding Inspectors
- ASNT Level II inspectors, D1.1 Certified Welders and other certified personnel
- Certified for onshore and offshore safety requirements such as BOSIET, HUET, H2S, API Rigging, Firefighting, First Aid, CPR/AED, Safe Gulf and others
- Valid passports, vaccinations and protocol for rapid deployment to varied locations around the world

Emergency Service

- Lee C. Moore offers one of the fastest response times in the industry
- Services available 24/7, every day of the year and we often mobilize within 24 hours
- Followed by Lee C. Moore's commitment to safety, our priority is to efficiently meet our customers' immediate need.

Recertification

- All makes and models of derricks, masts, substructures, blocks, and other accessories
- Lee C. Moore recertification is based on API RP 4G inspection criteria including review by our renowned engineering department
- Upon successful completion of the program, certificates and stainless steel recertification plates are issued



Unidentified Structures

- No problem for Lee C. Moore. Our team of engineers and technicians can survey, analyze and rate most any drilling structure in accordance with applicable API and industry standards. Shop-built and unidentified structures can now be rated and properly identified by Lee C. Moore.

Rig Building & Derrick Building Services

- Our crew is one of the most experienced in the world, specializing in derrick assembly, upgrades, modifications and disassembly. All necessary tools, equipment and materials are available.



Every service project completed by Lee C. Moore is followed by a detailed report of findings, recommendations and work completed. A quotation for recommended repair materials, replacement components, spare parts and upgrades are always available.

Lee C. Moore has the knowledge and expertise to keep your drilling structures in safe, dependable operating condition. Let us show you the value of Lee C. Moore service and how it can help you improve the condition of your rig fleet, reduce downtime and prevent accidents. Contact Lee C. Moore today to schedule the best in field service.



LEECMOORE™
A Woolslayer Company

5416 South Yale Avenue, Suite 500
Tulsa, Oklahoma 74135 USA

Telephone: +1-918-523-9191

www.lcm-wci.com