# BELOW-THE-HOOK LIFTING DEVICE
## Engineering Note Cover Page

Lifting Device Numbers:

FNAL Site No.: MAB (if applicable) Div. Specific No.: 146 (if applicable) Asset No. _____ (if applicable)

ASME B30.20 Group: (check one)
- ✓ Group I Structural and Mechanical Lifting Devices
- ˇ Group II Vacuum Lifting Devices
- ˇ Group III Magnets, Close Proximity Operated
- ˇ Group IV Magnets, Remote Operated

Device Name or Description: Industrial Battery Lifter

Device was: (check all applicable)
- ✓ Purchased from a Commercial Lifting Device Manufacturer
  mfg. name: Material Transportation Co.
- ˇ Designed and Built at Fermilab
- ˇ Designed by Fermilab and Built by a Vendor
  Assy drawing number: _____
- ˇ Provided by a User or Other Laboratory
- ˇ Other. Describe: _____

Engineering Note Prepared by: Delmar F Miller Jr Date: February 5, 2004

Engineering Note Reviewed by: Ang Lee Date: Feb. 5, 2004

Lifting Device Data:

Capacity: 4,000 lbs

Fixture Weight: 30 lbs

Service: ✓ normal ˇ heavy ˇ severe (refer to B30.20 for definitions)

Duty Cycle: _____ 8, 16 or 24 hour rating (applicable to groups III, and IV)

Inspections Frequency: _____

Rated Load Test by FNAL (if applicable): Date: _____ Load: _____

✓ Check if Load Test was by Vendor and attach the certificate.

Satisfactory Load Test Witnessed by: _____

Signature (of Load Test Witness): _____

Notes or Special Information:

see Attachments

BOWSER-MORNER, INC.
CORPORATE: 4518 TAYLORSVILLE ROAD. • P. O. BOX 51 • DAYTON, OHIO 45401 • 513/236-8805

RECEIVED
Subject to Count and Inspection
APR 5 1993
MATERIAL TRANS. CO.

# LABORATORY REPORT

By:

TO: Attn: Peter den Harder
Materials Transportation Company
1215 Industrial Blvd.
P.O. Box 1358
Temple, TX 76504

BMI NO.: 93030315
GROUP NO.: 539
P.O. NO.: 69945
DATE: March 31, 1993

ON: Proof load testing on two (2) submitted samples.

## SAMPLE IDENTIFICATION:

The client submitted two (2) battery beams, one rated at 4,000 lbs capacity and one with a 6,000 lbs capacity rating.

## TEST PROCEDURES:

The samples were proof load tested at 150% of the rated load capacity. The loads were gradually applied and held for a time interval not less than one minute.

Both beams were tested twice, once with the lifting hooks at the inner most position and once at the outer most position.

A calibrated Satec Universal Testing System was used to apply and monitor the loads.

## TEST RESULTS:

The 4,000 capacity beam was tested at 6,000 lbs and the 6,000 capacity at 9,000 lbs. Both held the applied loads for one minute with no visible deformation at the end of the test.

## NOTE:

All samples recovered for this project are being returned to the Client.

If there are any questions concerning this report please contact us.

Respectfully Submitted,
BOWSER-MORNER, INC.
Analytical Sciences Division

James J. Duncan

James J. Duncan, Supervisor
Mechanical & Metallurgical Testing

JJD/sr
1-Client
2-File

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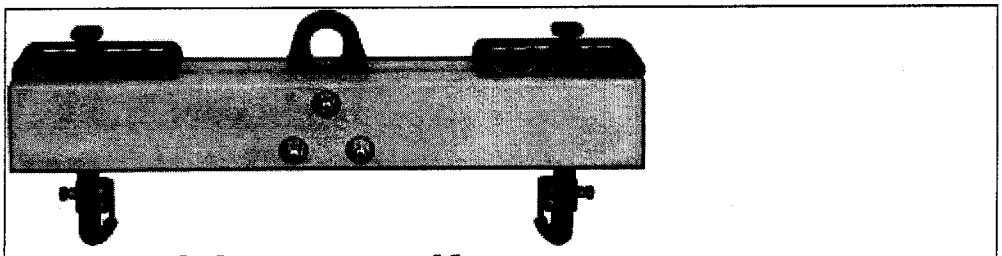

**Industrial Battery Lifters**

**Lifting Beams**- Nonconductive constructed of 2" by 6" laminated maple wood. They have a 1/2" thick black painted steel hoist plate with a 3" Ht. x 2 1/2" Wd. opening. Beams include hooks (made of 5/8" thick steel with a black painted finish) that have a unique plunger-style latch that locks into place to ensure safe battery transport. The hooks are adjustable along six retaining grooves on each side of the beam to accommodate various battery lengths. Can be used with the forklift attachment (sold separately) to lift heavy batteries. Beams is marked with work a 4000 Lbs. load limit.