

EDERER

INCORPORATED

Technical Description of Radio Controls System for 200/25 Ton Bridge Crane and 150/25 Ton Semi-Gantry Crane

Document EA-37548 Rev. A

Customer Purchase Order Number:
0599602-023

Prepared for:
Private Fuel Storage, LLC
Skull Valley, UT

Prepared by:
Lyle McFarland

November 17, 1998

Purpose: Provide description of the radio controls, including hoist and traverse motions, for a 200/25T Bridge and a 150/25T Semi-gantry crane. The cranes are intended for use at the proposed Private Fuel Storage Facility located in Skull Valley, Utah.

Operator Controls:

Each crane will be operated via a radio control system or emergency pendant control station. A selector switch mounted at the radio receiver will determine which operator control is enabled.

Radio System: A radio control system for each crane will be supplied with the following features:

General:

- Manufacture / Series: Telemotive/8000 or Cattron/MP
- Operating frequency 450-470 MHz
- Each radio system designed to prevent interference between systems
- Failsafe, the mainline magnetic disconnect de-energizes upon loss of power, low battery or loss of signal
- Selector switch, selects between radio or pendant control

Motions controls:

Main Hoist	Down/Up	5 steps in each direction
Aux. Hoist	Down/Up	5 steps in each direction
Trolley	East/West	5 steps in each direction
Bridge	North/South	5 steps in each direction

Other controls:

- Power on/off (mainline)
- Emergency stop (de-energizes mainline)
- Ultra-lift on/off

Transmitter:

- Low battery/transmit indicator (LED)
- Transmitter on LED
- Power on/off key switch (removable in the off position only)
- Emergency stop switch

Transmitter (continued):

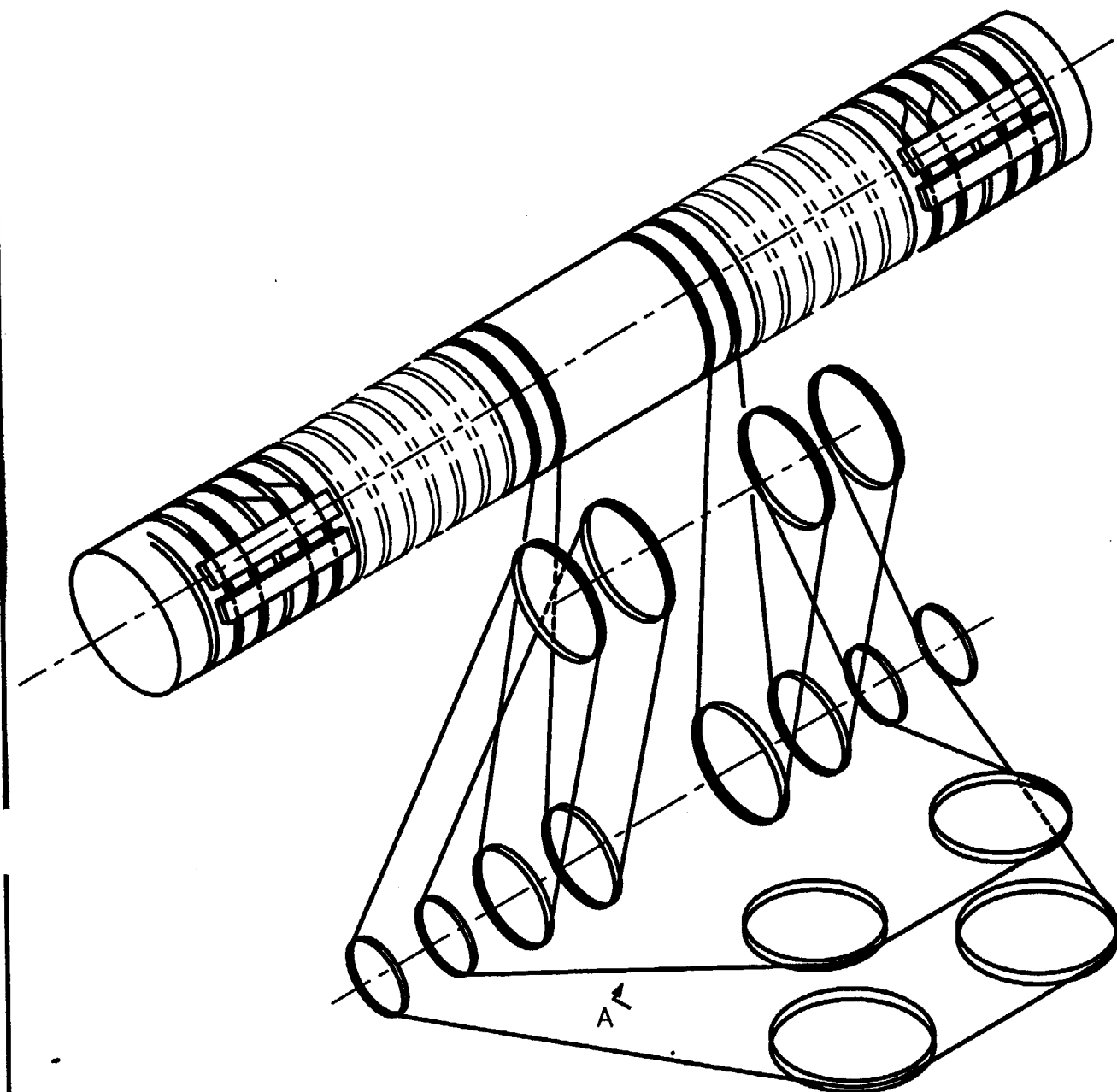
- Ultra-lift on/off switch
- Quantity 4 motion control levers, one for each motion, 5 steps in each direction of motion
- Internal antenna
- Nicad battery powered
- Carrying harness

Receiver:

- Mounted in a RFI shielded NEMA 12 enclosure
- Receiver digital microprocessor controlled
- On board diagnostics provided
- Receiving antenna with range limiting
- Relay output to interface crane controls
- 120 Vac power supply
- Range limiting

Accessories:

- Quantity 3 nicad or lead acid batteries for transmitter
Note: Telemotive utilizes lead acid batteries while Cattron utilizes nicad batteries
- Quantity 1 battery charger for batteries supplied
- Control transfer switch mounted in NEMA 12 enclosure



A

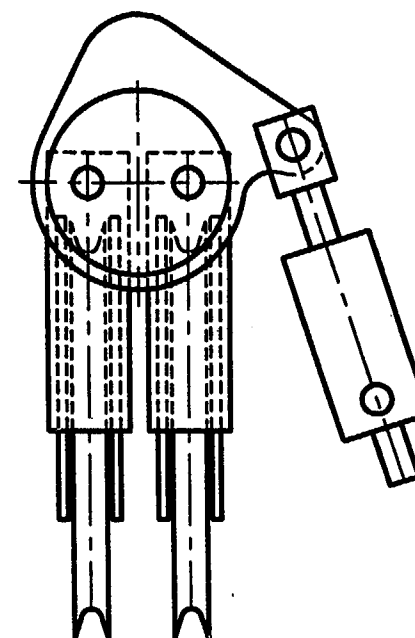
NOTES:

NSR

1. SPF - A TEST SAMPLE OF ROPE TO BE PULLED TO FAILURE.
MIN. TENSILE STRENGTH = 264,000 LBS.
MIN. YIELD STRENGTH = 158,400 LBS. (2% OFF SET)
2. D.V. REQ'D.
3. USE SPECIFIED ROPE ONLY FOR REPLACEMENT, SUBSTITUTIONS
SHOULD NOT BE MADE.

REVISIONS

LTR	DESCRIPTION	DATE	BY	CHK	ENG	APPD	APPD	APPD
A	ADD SECTION AA, PROJECT DATA	11-5-98	SRS	JLF	JLF	FEL	LA	



△ SECTION AA

APERTURE CARD

Also Available on
Aperture Card

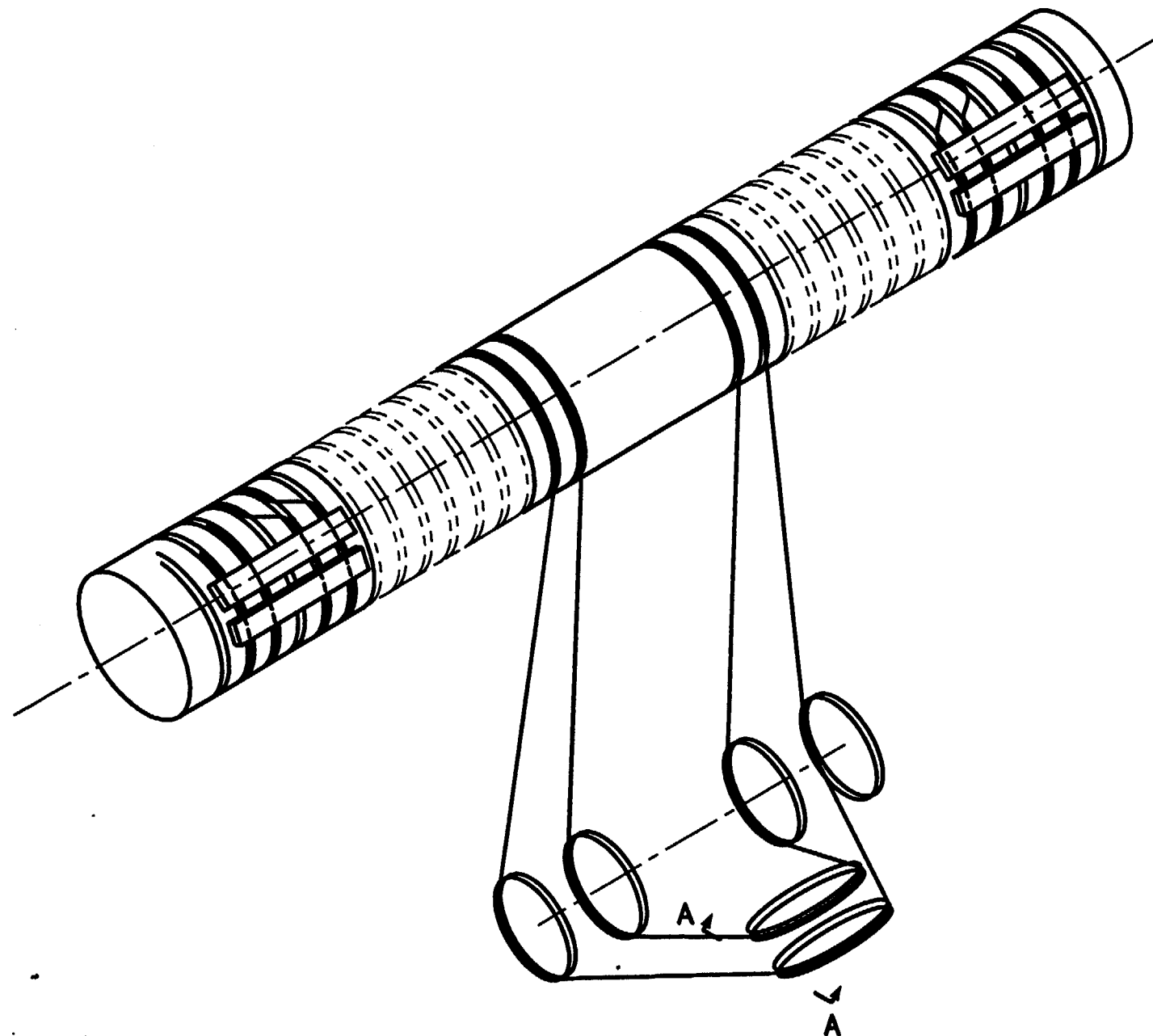
9902220105-01

200/25 TON BRIDGE CRANE
PRIVATE FUEL STORAGE FACILITY
PRIVATE FUEL STORAGE, LLC
PO # 0599602-023

REDUNDANT REEVING

TWO INDEPENDENT ROPES REEVED TO PROVIDE A TOTAL OF 16 PARTS.
BOTH ENDS ANCHORED TO DRUM.

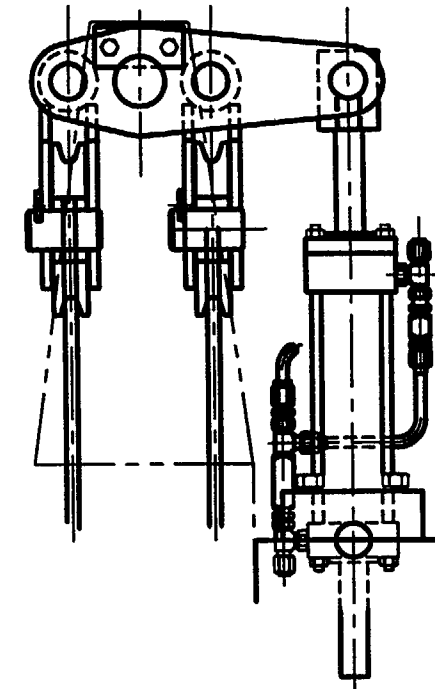
C.I.	1 5/8 DIA WIRE ROPE	2	WIRECO 6 X 36 WS (EIPS/IWRC)	
ITEM NO.	DESCRIPTION	QTY.	MATERIAL	WEIGHT
LIST OF MATERIALS				
ITEMS WITH SPECIAL QUALITY REQUIREMENTS	14.4	SCALE	NONE	TOTAL WT. LBS.
ADVANCE ORDERED ITEMS	COST ITEM NO.	<div>EDERER INCORPORATED</div> <div>E EDERER CRANES W WASHINGTON CRANES S STAR CRANES</div>		
DRAWN RRM ESP, Inc.	10-13-98			
CHECK JLF	10-14-98			
ENG. JLF	10-14-98			
APPD. FEL	10-14-98			
APPD. L.L. ANDERSON	10-14-98	REEVING DIAGRAM SIXTEEN PARTS (MAIN HOIST)		
APPD.				
MACHINING FRACTIONAL ± 1/64 TOLERANCES DECIMAL ± .010 OR AS NOTED ANGLE ± 1-0"				
FIRST USED ON F-2621		B-36951		REV A
		DWG. NO.		SHT



NOTES: NSR

1. SPF - A TEST SAMPLE OF ROPE TO BE PULLED TO FAILURE.
MIN. TENSILE STRENGTH = 79,600 LBS.
MIN. YIELD STRENGTH = 47,760 LBS. (2% OFF SET)
2. D.V. REQ'D.
3. USE SPECIFIED ROPE ONLY FOR REPLACEMENT, SUBSTITUTIONS
SHOULD NOT BE MADE.

REVISIONS									
LTR	DESCRIPTION	DATE	BY	CHK	ENG	APPD	APPD	APPD	APPD
A	ADD SECTION AA, & PROJECT DATA	11-5-98	SRS	JLF	JLF	FEL	Y		



SECTION AA

APERTURE CARD

Also Available on
Aperture Card

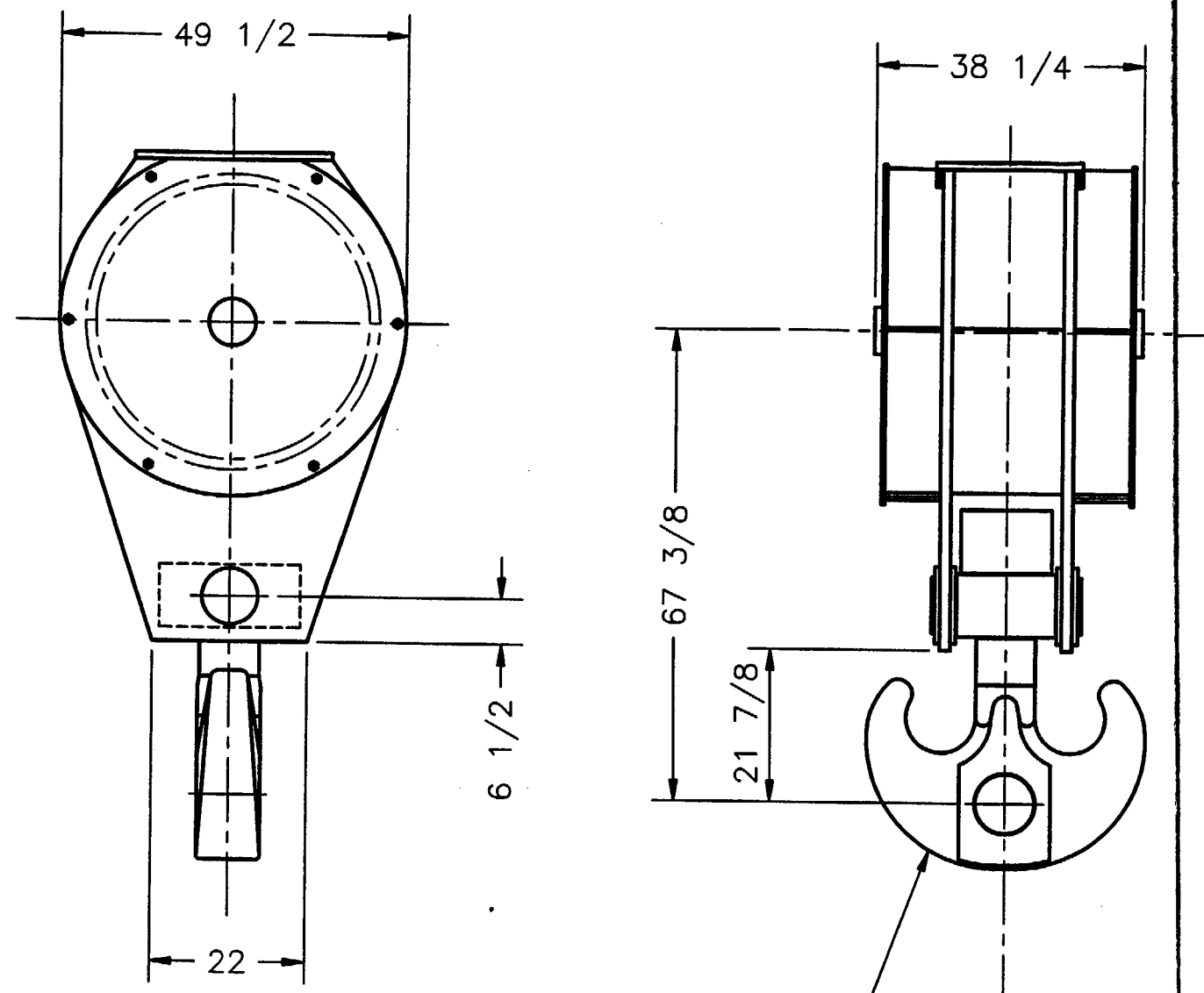
9902220105-02

200/25 TON BRIDGE CRANE
PRIVATE FUEL STORAGE FACILITY
PRIVATE FUEL STORAGE, LLC
PO # 0599602-023

REDUNDANT REEVING

TWO INDEPENDENT ROPES REEVED TO PROVIDE A TOTAL OF 8 PARTS.
BOTH ENDS ANCHORED TO DRUM.

C.I.	7/8 DIA. WIRE ROPE	2	WIRECO 6 X 36 WS (EIPS/IWRC)	
ITEM NO.	DESCRIPTION	QTY.	MATERIAL	WEIGHT
LIST OF MATERIALS				
ITEMS WITH SPECIAL QUALITY REQUIREMENTS		20.4	SCALE	NONE
ADVANCE ORDERED ITEMS		COST ITEM NO.	TOTAL WT. LBS.	
DRAWN RRM ESP, Inc.		10-13-98	<div> <div>EDERER INCORPORATED</div> <div> <div>E EDERER CRANES</div> <div>U WASHINGTON CRANES</div> <div>S STAR CRANES</div> </div> </div>	
CHECK JLF		10-14-98		
ENG. JLF		10-14-98		
APPD. FEL		10-14-98		
APPD. L.L. ANDERSON		10-14-98		
APPD.			<div>REEVING DIAGRAM</div> <div>EIGHT PARTS (AUX HOIST)</div>	
MACHINING FRACTIONAL ± 1/64				
TOLERANCES DECIMAL ± .010			<div>B-36952</div> <div>DWG. NO.</div>	
OR AS NOTED ANGLE ± 1-0"				
FIRST USED ON F-2621			<div>REV A</div> <div>SHT</div>	



SEE DWG. NO. C-36975
FOR HOOK DIMENSIONS

REVISIONS

LTR	DESCRIPTION	DATE	BY	CHK	ENG	APPD	APPD	APPD
A	PER CUST. COMMENTS	11/17/98	JLF	SRS	JLF		4	

**APERTURE
CARD**

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9902220105-03



PRIVATE FUEL STORAGE FACILITY
P.O. NO. 0599602-023
200 TON BRIDGE CRANE

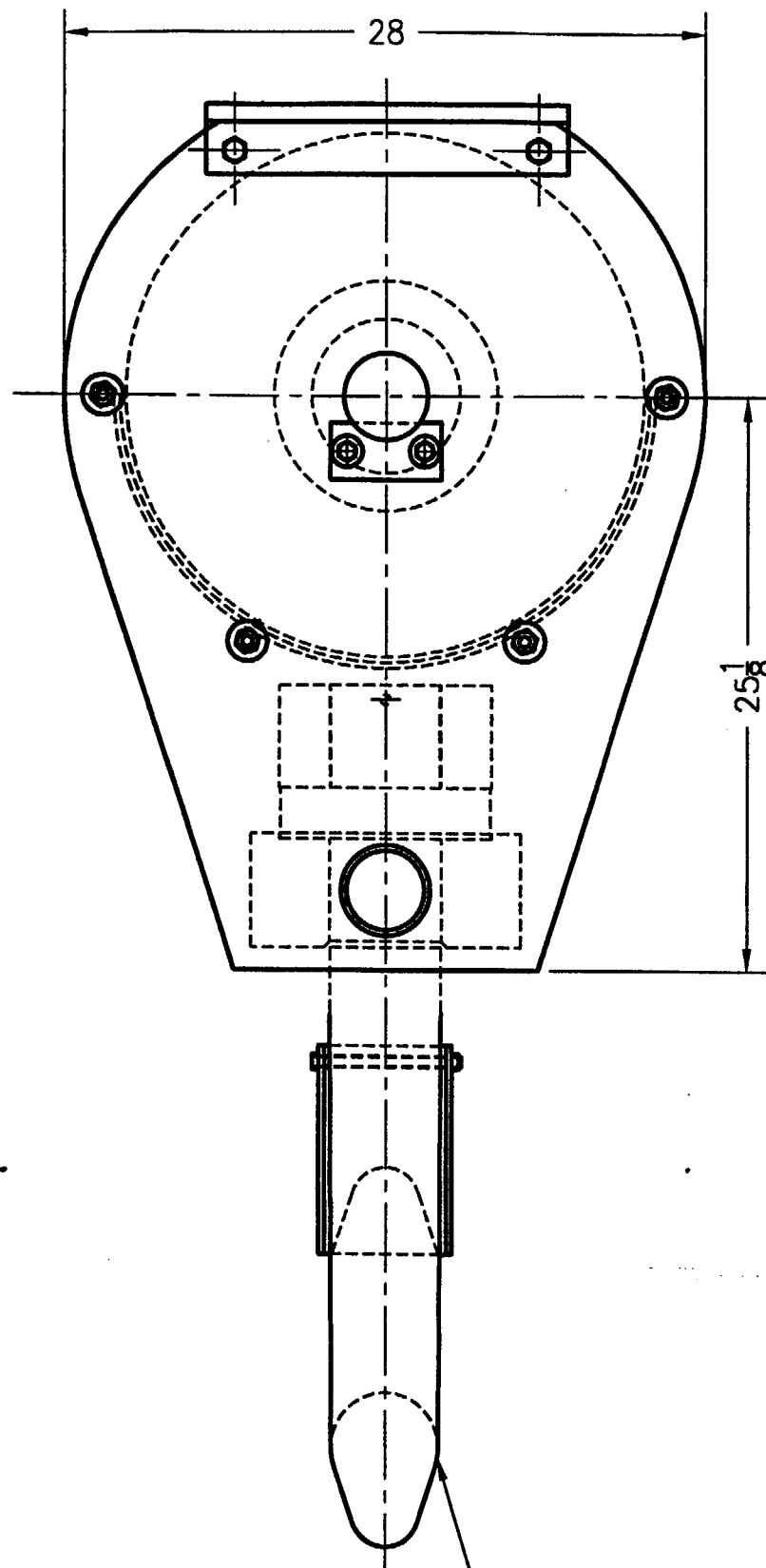
ITEM NO.	DESCRIPTION	QTY.	MATERIAL	WEIGHT
LIST OF MATERIALS				
ITEMS WITH SPECIAL QUALITY REQUIREMENTS		0	SCALE NONE	TOTAL WT. — LBS.
ADVANCE ORDERED ITEMS		COST ITEM NO.		
DRAWN	JLF	10/28/98		
CHECK	FEL	10/29/98		
ENG.	JLF	10/29/98		
APPD.	FEL	10/29/98		
APPD.	LLA	10/29/98		
APPD.				
MACHINING	FRACTIONAL	± 1/64		
TOLERANCES	DECIMAL	± .010		
OR AS NOTED	ANGLE	± 1-0°		
FIRST USED ON	F-2621			

EDERER
INCORPORATED

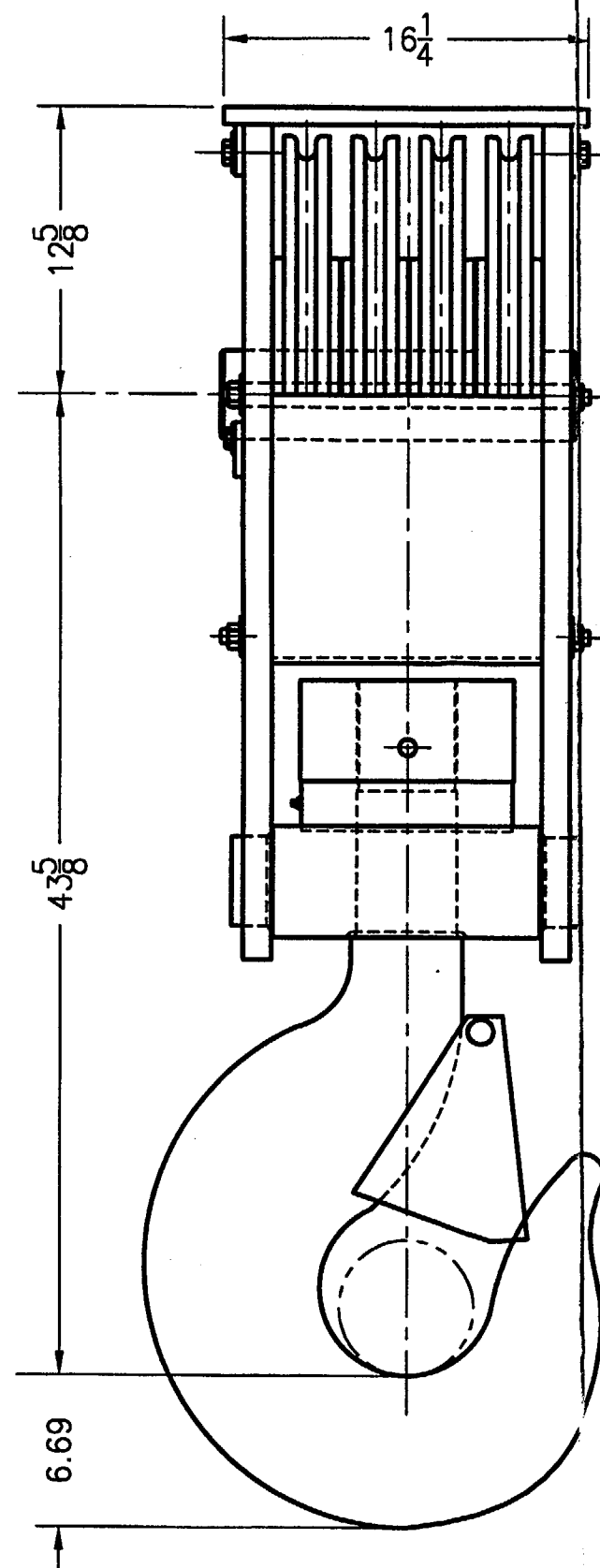
E EDERER CRANES **W** WASHINGTON CRANES **S** STAR CRANES

**MAIN HOIST BLOCK
& HOOK DIMENSIONS**

B-37061	— SHT	REV A
DWG. NO.		



SEE CROSBY CATALOG,
CROSBY # 1024983 ALLOY HOOK
CROSBY # 1093720 PL LATCH



REVISIONS									
LTR	DESCRIPTION	DATE	BY	CHK	ENG	APPD	APPD	APPD	APPD

APERTURE CARD

Also Available on
Aperture Card

PRIVATE FUEL STORAGE FACILITY
P.O. NO. 0599602-023
200 TON BRIDGE CRANE &
150 TON SEMI-GANTRY CRANE

9902220105-04

ITEM NO.	DESCRIPTION	QTY.	MATERIAL	WEIGHT
LIST OF MATERIALS				
ITEMS WITH SPECIAL QUALITY REQUIREMENTS		0	SCALE 1 1/2"=1'-0"	TOTAL WT. — LBS.
ADVANCE ORDERED ITEMS		COST ITEM NO.	EDERER INCORPORATED E EDERER CRANES W WASHINGTON CRANES S STAR CRANES	
DRAWN SRS		11/5/98		
CHECK JLF		11/17/98		
ENG. JLF		11/17/98		
APPD. RAS		11/18/98		
APPD. <i>[Signature]</i>		11-18-98	AUX. HOIST BLOCK & HOOK DIMENSIONS	
APPD.				
MACHINING		FRACTIONAL	± 1/64	B-37062 DWG. NO. — SHT — REV —
TOLERANCES		DECIMAL	± .010	
OR AS NOTED		ANGLE	± 1-0"	
FIRST USED ON F-2621/22				

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153 _____

156 _____

158 _____

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C-36975, REV. A
SISTER HOOK 200 TON**

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D-1

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PA-2189, REV. C:
CLEARANCE DRAWING 200/25
TON CAPACITY BRIDGE CRANE
PRIVATE FUEL STORAGE
FACILITY SKULL VALLEY, UTAH

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D-36976, REV. A:
200/25 TON CAPACITY BRIDGE
CRANE BRIDGE ARRANGEMENT
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D-36976, REV. A**

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D-3

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D-36977, REV. A:
200/25 TON CAPACITY BRIDGE
CRANE TROLLEY
ARRANGEMENT**

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D-36977, REV. A**

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D-4

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PA-2190, REV. D:
CLEARANCE DRAWING 150/25
TON CAPACITY SEMI-GANTRY
CRANE PRIVATE FUEL STORAGE
FACILITY SKULL VALLEY, UTAH**

**WITHIN THIS PACKAGE...OR,
BY SEARCHING USING THE
DRAWING NUMBER:
PA-2190, REV. D**

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

D-5

9903020158

150/25 SEMI-GANTRY CRANE

This attachment includes the following design drawings and documents for the Private Fuel Storage Facility 150/25 ton Semi-Gantry Crane:

APPENDIX B SUPPLEMENT TO GENERIC TOPICAL LICENSING REPORT EDR-1, REV. 1, FACILITY SPECIFIC CRANE DATA, 150 TON SEMI-GANTRY CRANE

APPENDIX C SUPPLEMENT TO GENERIC TOPICAL LICENSING REPORT EDR-1, REV. 1, SUMMARY OF REGULATORY POSITIONS, 150 TON SEMI-GANTRY CRANE

SEISMIC QUALIFICATION ANALYSIS, DECEMBER 1998 (150 TON SEMI-GANTRY CRANE)

EDERER DRAWING B-37063, REV. A, MAIN HOIST BLOCK & HOOK DIM (150 TON CRANE)

EDERER DRAWING B-36953, REV. A, REEVING DIAGRAM SIXTEEN PARTS (MAIN HOIST)

EDERER DRAWING B-36954, REV. A, REEVING DIAGRAM EIGHT PARTS (AUX HOIST)

EDERER DRAWING PA-2190, REV. D, CLEARANCE DWG. 150/25 TON SEMI-GANTRY CRANE

EDERER DRAWING D-36978, REV. A, BRIDGE ARRANGEMENT 150/25 TON SEMI-GANTRY

EDERER DRAWING B-36979, REV. B, TROLLEY ARRANGEMENT 150/25 TON CAPACITY