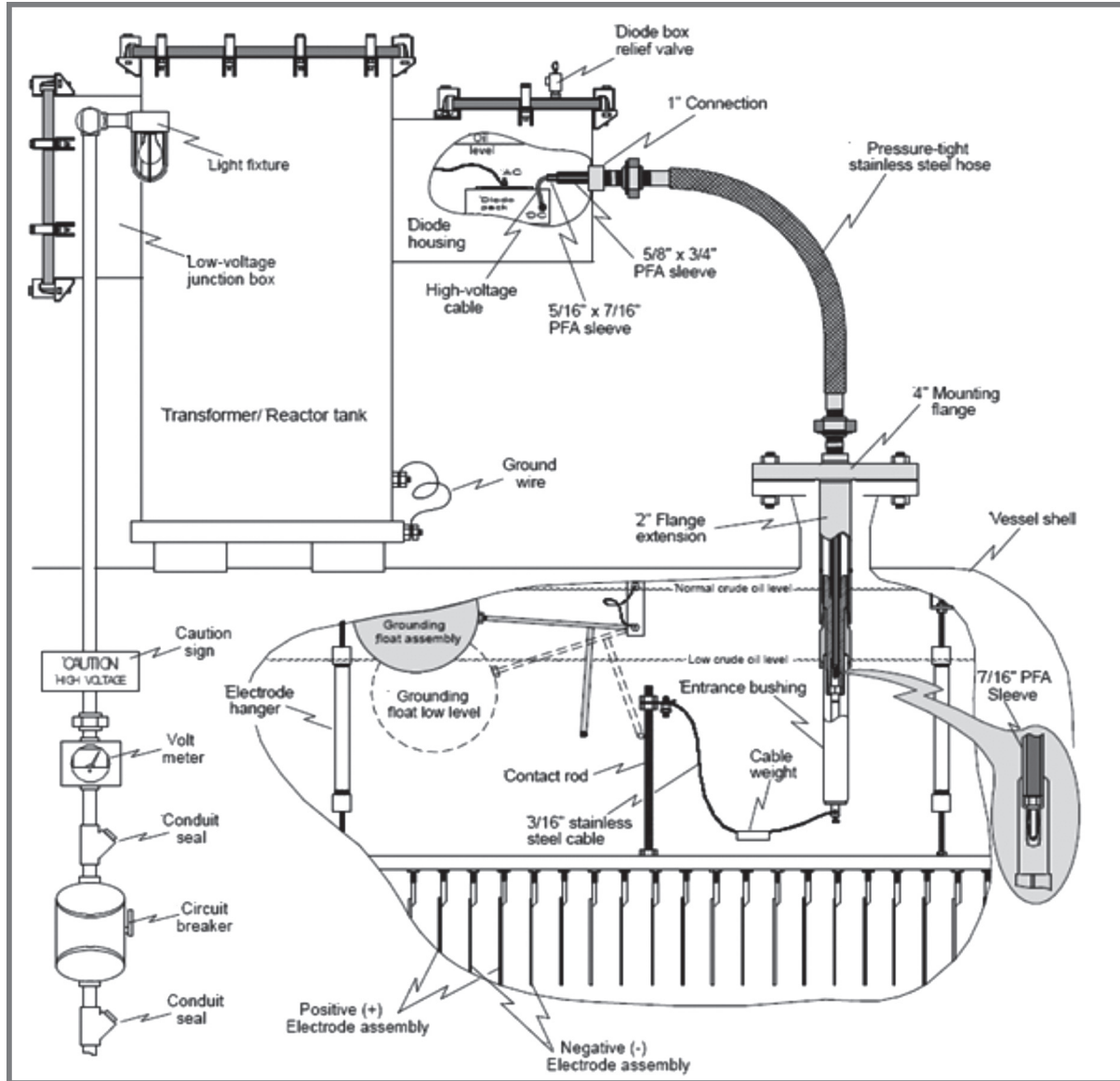


# **CHAPTER 9**

## Grid Components

### EBD-1500 Entrance Bushing Installation



- \*Be sure the white insulating portion of the entrance bushing is extended into the oil phase far enough to remain covered when the grounding float balls in the low (shorted) position.
- \*Both the (+) and (-) DC electrodes are similarly connected to their polarities on the diode pack.

**Contact your nearest Natco Service Centre for Service & Parts & Sizing  
Toll Free: 1-800-661-6628**

## GRID COMPONENTS & ACCESSORIES

Part No.	Description
48126009	EDD 1500 Entrance Bushing (Body)
48126048	High Voltage Cable (78")
11650065	PFA Tubing 5/16 X 7/16 (78")
11650067	PFA Tubing 5/8 _ (78")
48126051	Entrance Bushing (120")
N/A	Entrance Bushing Over 120" (Special Order)
42220000	Transformer Oil (20 Liters)
42221000	1" Entrance Bushing Flex
42221006	1/8" SS Wire Rope
42220002	1/8" Cable Clamp
48126010	1/8" Cable Weight
48400010	3" 150 2" Thick Entrance Bushing Blind
48400020	4" 150 2" Thick Entrance Bushing Blind
48400022	10" X 2" Extension Nipple
48400022	15" X 2" Extension Nipple
48400026	19" X 2" Extension Nipple
48400028	22" X 2" Extension Nipple
42001800	NWL Transformer Lid Clips
48012218	8 ft Teflon Hanger (Standard)
48012220	6 ft Teflon Hanger (Standard)
N/A	High Strength Hanger (HTA-15)
N/A	High Temperature Hanger (HTA-2000)
N/A	Howmar Solid Rod Hanger (2") (M.3009-380)
48126035	TI-23 Insulator (Transformer)
N/A	TI-60 Insulator (Transformer)
N/A	TI-60FT Feed-through Insulator
61321121	0-100 VAC Voltmeter
N/A	0-XXX AAC Amp Meter
N/A	CI-1 Div 1 Meter Housing
N/A	Light Fixture CI- 1 Div 2
N/A	Transformer Breaker (Special Order)
42001122	2 Amp. Fuse/Holder
N/A	Steel Grid Plates and Hard Ware (Special Order)
N/A	Composite Fiberglass Grid Plates (Special Order)
48012200	Fiberglass Wing Tips for Steel Grid Plates

### **Natco Electrostatic Grid Transformers and Controllers**

#### **Load Responsive Controller (LRC)**

- Provides a one-programmed voltage profile sequence to the grid transformer to produce optimum, or specific, coalescing / mixing for crude oil treating.
- Monitors the Treater Grid performance and protects all components against upset or dangerous conditions such as electrical over load.
- Returns the grid system to normal operation immediately after the occurrence / correction of upset condition
- Quenches the power to terminate high current arcing situations.

#### **Dual Frequency Controller**

- The Dual Frequency process improves the performance of an electrostatic dehydration process by creating a high voltage field that promotes aggressive water droplet movement and coalescence. The Dual Frequency process overcomes the problem created by high oil conductivity and low interface tension.
- By using the high frequency transistors to control the voltage levels, the Dual Frequency transformer is capable of combining a high frequency base voltage with a low frequency modulation. The high frequency significantly reduces the voltage decay from the electrodes and sustains the DC voltage field. The low frequency provides a controlled droplet oscillation and prevents droplet dispersion.
- In addition to the improvements in process performance, the Dual Frequency process typically provides the best performance at lower voltage levels than the typical Dual Polarity or AC processes. This reduces the electrical stress imposed on hangers, bushings, cables, diodes, etc.

#### **Natco NWL Grid Transformers**

- 5 – 250 KVA sizes (sized to grid area requirements)
- Primary voltage: 240, 400, 480, 600 VAC, 50 Hz or 60 Hz rating, 1 phase
- Secondary voltage: 12, 16.5, 20, 23, 25 KV DC voltage tapes
- 35% or 100% reactance core windings
- Certification: UL / CSA/ EX Class 1, Div 2
- Transformer is oil filled
- AC to DC High Voltage is diode rectified

**When ordering transformer parts or accessories you will need to speak with a qualified technical advisor that can be contacted at**

**Toll Free: 1-800-661-6628**