

SECTION VI - TECHNICAL SPECIFICATIONS

GROUNDING WYE CAPACITOR BANKS

1.0 GENERAL

Requirements of General Specifications applicable to Banked Rack Mounted Distribution Capacitors apply to all work under this specification. Nominal system voltages are: 2400/4160 volts, 7620/13200 volts and 15,240/26,400 volts grounded wye.

2.0 CAPACITOR BANK RATINGS

| <u>ITEM ID</u> | <u>KVAR</u> | <u>BIL</u> | <u>TYPE</u> | <u>SWITCHES</u> |
|----------------|-------------|------------|-------------|-----------------|
|----------------|-------------|------------|-------------|-----------------|

2400/4160 VOLTS, SINGLE BUSHING, FIXED

| | | | | |
|------------|-----|----|-----------|---|
| CAP BA 004 | 150 | 95 | GROUNDING | 0 |
| CAP BA 005 | 300 | 95 | GROUNDING | 0 |
| CAP BA 006 | 600 | 95 | GROUNDING | 0 |

2400/4160 VOLTS, TWO BUSHING, SWITCHED NEUTRAL

| | | | | |
|------------|-----|----|-------------|---|
| CAP BA 007 | 150 | 95 | UNGROUNDING | 4 |
|------------|-----|----|-------------|---|

7620/13200 VOLTS, TWO BUSHING, SWITCHED

| | | | | |
|------------|-----|----|-----------|---|
| CAP BA 009 | 300 | 95 | GROUNDING | 3 |
| CAP BA 010 | 600 | 95 | GROUNDING | 3 |

15,240/26,400 VOLTS, TWO BUSHING, SWITCHED

| | | | | |
|------------|------|-----|-----------|---|
| CAP BA 001 | 1200 | 125 | GROUNDING | 3 |
| CAP BA 002 | 600 | 125 | GROUNDING | 3 |

15,240/26,400 VOLTS, TWO BUSHING, SWITCHED NEUTRAL

| | | | | |
|------------|------|-----|-------------|---|
| CAP BA 003 | 1200 | 125 | UNGROUNDING | 4 |
|------------|------|-----|-------------|---|

15,240/26,400 VOLTS, TWO BUSHING, CONTROLLABLE

| | | | | |
|------------|------|-----|-----------|---|
| CAP BA 011 | 300 | 125 | GROUNDING | 3 |
| CAP BA 012 | 1200 | 125 | GROUNDING | 3 |

3.0 CAPACITOR UNITS

3.1 The following lists the type and quantity of units used in each bank assembly.

| CAPACITOR BANK | CAPACITOR UNIT | |
|----------------|----------------|-----------------|
| <u>ITEM ID</u> | <u>ITEM ID</u> | <u>QUANTITY</u> |
| CAP BA 001 | CAP UN 005 | 6 |
| CAP BA 002 | CAP UN 005 | 3 |
| CAP BA 003 | CAP UN 005 | 6 |
| CAP BA 004 | CAP UN 006 | 3 |

| | | |
|------------|------------|---|
| CAP BA 005 | CAP UN 007 | 3 |
| CAP BA 006 | CAP UN 008 | 3 |
| CAP BA 007 | CAP UN 009 | 3 |
| CAP BA 009 | CAP UN 016 | 3 |
| CAP BA 010 | CAP UN 016 | 6 |
| CAP BA 011 | CAP UN 029 | 3 |
| CAP BA 012 | CAP UN 005 | 6 |

- 3.2 See technical specifications for Rack Mounted Capacitor Units for individual unit ratings and dimensions.

4.0 **SWITCHED BANKS**

- 4.1 Each rack assembly shall be complete with oil switches, designed for capacitor switching using a hook-stick.

4.2 RATINGS

Each switch shall be single phase and single pole. The switch shall be capable of breaking a three-phase, 60 hertz load as indicated below.

| <u>UNIT</u> | <u>KV CLASS</u> | <u>BIL</u> | <u>AMPS</u> |
|-------------|-----------------|------------|-------------|
| CAP BA 001 | 34.5GRD Y/19.9 | 125 | 60 |
| CAP BA 002 | 34.5GRD Y/19.9 | 125 | 60 |
| CAP BA 003 | 34.5GRD Y/19.9 | 125 | 60 |
| CAP BA 007 | 24.9GRD Y/14.4 | 95 | 200 |
| CAP BA 009 | 24.9GRD Y/14.4 | 95 | 200 |
| CAP BA 010 | 24.9GRD Y/14.4 | 95 | 200 |

4.3 BUSHINGS

Bushings shall be similar to those of the capacitor units in order to maintain the BIL rating.

4.4 TERMINALS

The terminals of each switch shall accommodate conductors up to and including size 2/0 and shall include insulated terminal covers.

5.0 **CONTROLLABLE BANKS**

5.1 VACUUM SWITCHES

Cooper vacuum switches, #VCS1 shall be used.

5.2 TERMINAL BOX

A prewired terminal box shall be included on the rack including necessary receptacles for the current monitoring insulator and meter socket control cable terminations (male or female plug/socket).

5.3 CURRENT MONITORING INSULATOR

The current monitoring insulator shall be a lindsey #96 7 0 / C 1 0 C 0 with a 15 foot lead including cannon plug.

Also including #2121 - vertical clamp adapter
#2120 - horizontal clamp adapter
#2004 - Horizontal Mounting Base
"Live Line" trunion clamp for 636AAAC
#9602 - Clamp Mounted Choke
#2040 - Line Post Mounting Stud.

5.4 METER SOCKET

A Cooper meter socket, #CSB1A, shall be included.

5.5 CONTROL CABLE

A Cooper control cable, #CSCC11, shall be included.