DRAWING No.

H6543/TD/7216

DO NOT SCALE

V.C.B.
A.C.B.
MCCB
R ⊗ RED BREAKER ON INDICATION
G ⊗ GREEN BREAKER OFF INDICATION
AT ⊗ AMBER AUTO TRIP INDICATION
W ⊗ WHITE TRIP CKT. HEALTHY INDICATION
B ⊗ SPRING CHARGED INDICATION
A – AMMETER
AS – AMMETER SELECTOR SWITCH
V – VOLTMETER
VS – VOLTMETER SELECTOR SWITCH
PF – POWER FACTOR METER
KW – KILO WATT METER
KWH – KILO WATT HOUR METER
MD – MEXIMUM DEMAND
O/L – OVER LOAD RELEASED
S/C – SHORT CIRCUIT RELEASED
U/V – UNDER VOLTAGE RELEASED
APFC – AUTOMATIC POWER FACTOR CORRECTION

DETAILS OF SUBSTATION–B

SUPPLY FROM SUB–STATION–A
3C X 300mm^2 11KV AL. X.L.P.E. ARMOURED CABLE
SEE NOTE–1
SUPPLY TO SUB–STATION–C
3C X 300mm^2 11KV AL. X.L.P.E. ARMOURED CABLE

H.T. SWITCHGEAR PANEL

3NO PT CLASS 0.5 11000 / 3√110V
CURRENT TRANSFORMER 3NOS. CTR 150/5-5AMP
METERING CORE 15VA CL 10
PROTECTION CORE 15VA 5P 20
LOAD MANEGER
KWH MD PF(3Φ 4Ø)
PM 700 OR EQ
R Y B & N
2 O/C & 1 E/F NUMARICAL RELAY
P BASE
VCB-1 1250AMP AT 26.3KA BREAKING CAPACITY
G B W R AT

INTERLOCKING OF H.T. BREAKER V.C.B.1 & V.C.B.2
V.C.B.1 SHOULD BE ON WHEN V.C.B.2 SHOULD BE OFF
OR VICE–VERSA

11000V TPN 800A 50KA FOR 1SEC

VCB-2 1250AMP AT 26.3KA BREAKING CAPACITY
VCB-3 1250AMP AT 26.3KA BREAKING CAPACITY
VCB-4 1250AMP AT 26.3KA BREAKING CAPACITY
VCB-5 1250AMP AT 26.3KA BREAKING CAPACITY
SPACE HEATER ALONG WITH THERMOSTATE CONTROL IN EACH PANEL
B.E.

3C X 185mm 11KV AL. X.L.P.E. ARMOURED CABLE

11KV/415V 1500KVA OUTDOOR TRANSFORMER
2NOS B.E.
2NOS N.E.
SEE NOTE–1

11KV/3.3 KV OUTDOOR TRANSFORMER
ONLY SPACE FOR TRANSFORMER PROVISION IF REQUIRED FOR 100T L.L. CRANE

NOTE:–
1) CAPACITY OF THE TRANSFORMER TO BE DECIDED BY CRANE SUPPLIER
2) SUPPLY & INSTALLATION OF THIS TRANSFORMER IS IN SCOPE OF CRANE MFG.

NOTE:–1
C.T. FOR DIFFRENTIAL RELAY SHOULD BE ON TRANSFORMER

2500AMP 3ø + NEUTRAL + EARTH CU. BUS DUCT

SUPPLY FROM 1500KVA TRANSFORMER IN SUBSTATION–B

INTERLOCKING OF MAIN L.T. BREAKERS :–
* A.C.B.3 SHOULD BE OFF WHEN A.C.B.1 & A.C.B.2 ARE ON
* A.C.B.3 SHOULD BE ON WHEN A.C.B.1 IS ON & A.C.B.2 IS OFF
* A.C.B.3 SHOULD BE ON WHEN A.C.B.1 IS OFF & A.C.B.2 IS ON

MAIN L.T. PANEL IN SUBSTATION–B

DISTRIBUTION PANEL FOR CRADLE ASSEMBLY & STORES FROM SUBSTATION–B
2500A 4P ELECTRICALLY OPERATED DRAWOUT TYPE ETU 45B/SR61C/EQ WITH DISPLAY ACB WITH O/L, S/C & E/F
M.C.B.
A.C.B.1 415V, 3ø 50HZ
3NOS C.T. FOR P.F. IMPROVEMENT PANEL INPUT
CONNECTED LOAD =
DEMAND LOAD =
SPACE HEATER ALONG WITH THERMOSTATE CONTROL IN EACH PANEL
C.T.s:– 2500/5A, CL.–1, 15V.A.
L.M. LOAD MANAGER
CGD31
2500/5A CLSP10 10VA
3000AMP (3PHASE+NEUTRAL+EARTH) TINNED COPPER BUS BAR
12WAY ANNUNCIATOR WINDOWS
A.C.B.3 415V, 3ø 50HZ BUS COUPLER
2500A 4P ELECTRICALLY OPERATED DRAWOUT TYPE ETU 45B/SR61C/EQ WITH DISPLAY ACB WITH O/L, S/C & E/F
A.C.B.2 415V, 3ø 50HZ
CONNECTED LOAD = 2550.00KW
DEMAND LOAD =
DISTRIBUTION PANEL FOR SOUTH QUAY FROM SUBSTATION–B

1250A TP ACB | 400A TP MCCB | 400A | 400A | 400A | 400A | 400A | 400A | 1250A TP ACB | A.C.B.3 | 1250A TP ACB | 630A TP MCCB | 630A | 400A | 400A | 400A | 400A | 400A | 400A | 400A | 400A | 400A | 100A | 400A | 100A | 100A | 250A | 100A | 100A

MAIN L.T. PANEL FOR CRADLE ASSEMBLY (666KW) 2NOSX3.5CX400mm^2 AL. ARMOURED CABLE
MAIN L.T. PANEL FOR STORES (148KW) 2NOSX400mm AL. ARMOURED CABLE
FIRE PUMP PANEL (189KW/253HP) 2NOSX3.5CX240mm^2 AL. ARMOURED CABLE
SPARE
SPARE
SPARE
SPARE
SPARE
4NOS.X3.5CX400mm^2 AL. ARMOURED CABLE
A.P.F.C. BANK 750KVAR
4NOS.X3.5CX400mm^2 AL. ARMOURED CABLE
415V 50HZ 3PHASE SUPPLY WITH 30mA TP MCCB AT EACH DSU
2NOSX3.5CX400mm^2 AL. ARMOURED CABLE
A.P.F.C. BANK 750KVAR
SPARE
D.S.U.8 2NOSX3.5CX185mm^2 AL. ARMOURED CABLE
D.S.U.9 2NOSX3.5CX185mm^2 AL. ARMOURED CABLE
D.S.U.10 2NOSX3.5CX185mm^2 AL. ARMOURED CABLE
D.S.U.11 2NOSX3.5CX185mm^2 AL. ARMOURED CABLE
D.S.U.12 2NOSX3.5CX185mm^2 AL. ARMOURED CABLE
D.S.U.13 2NOSX3.5CX185mm^2 AL. ARMOURED CABLE
D.S.U.14 2NOSX3.5CX185mm^2 AL. ARMOURED CABLE
D.S.U.15 2NOSX3.5CX185mm^2 AL. ARMOURED CABLE
SPARE
SPARE
FOR 115V 50HZ 3PHASE 150KVA EACH 100A TP MCCB AT EACH DSU 3.5CX400mm^2 AL. ARMOURED CABLE
D.B. OF 230V 50HZ 32A 1ø OUTGOING 3.5CX50mm^2 AL. ARMOURED CABLE
MAIN LIGHTING PANEL OF SUBSTATION–B 3.5CX50mm^2 AL. ARMOURED CABLE
DISTRIBUTION BOARD FOR CAPSTAN 3.5CX185 mm^2 AL. ARMOURED CABLE
SPARE
SPARE

SEE NOTE–4

B.E.

NOTES:–

1. FOR OTHER DETAILS, REFER LIST OF DRGS. IN DRG. NO.H6543/TD4001
2. FOR LINEDIAGRAM REFER DRG. NO H6543/TD/7551,H6543/TD/7552.
3. H.T. CABLE FOR SOUTH QUAY WILL BE LAID BY WET BASIN CONTRACTOR ALONG WITH CABLE TERMINATION
4. L.T. CABLE FOR SOUTH QUAY WILL LAID BY WET BASIN CONTRACTOR ALONG WITH CABLE TERMINATION AND ALSO CABLING FOR FIRE PUMP PANEL CONNECTED FROM SUBSTATION–B.

REV	DATE	DESCRIPTION	BY	CHK	APPD

REVISIONS

CLIENT

MAZAGON DOCK LTD.
DOCKYARD ROAD,
MUMBAI – 400 010.

PROJECT:

MAZDOCK MODERNISATION PROJECT

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TENDER DRAWING.

DRAWING TITLE:

BUILDINGS
LINE DIAGRAM FOR SUB-STATION-B & CRADLE ASSUMBLY SHOP & STORES MAIN L.T.PANELS PART-1

DRAWN	Benny	DATE	08/12/2006
JOB No.	H6543	AUTOCAD REF.	

SCALE AT A1 - 1:100

DRAWING No. H6543/TD/7216

REVISION R0

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