



# **Jawaharlal Nehru Port Authority**

## **CHEMCONNECT-2022**

### **Liquid Cargo (Chemical) Handling Facilities at JNPA**

**(Girish Thomas, CMT)**

**21<sup>st</sup> September 2022**



# JNPA Terminals – A Bird’s Eye View



# JNPA : Port Introduction

							
<b>JNPCT</b> May 1989 1.5 M TEUs 22.1 MMTPA	<b>NSICT (DP World)</b> Apr 1999 1.2 M TEUs 20.5 MMTPA	<b>Liquid Terminal (BPCL/ IOCL)</b> Feb 2002 7.2 MMTPA	<b>JNPT-SDB</b> Sep 2002 4.5 MMTPA	<b>APMT (Maersk &amp; CONCOR)</b> Mar 2006 1.8 M TEUs / 23.7 MMTPA	<b>NSIGT (DP World)</b> Jul 2016 0.8 M TEUs 10.3 MMTPA	<b>BMCT (PSA)</b> Feb 2018 2.4 M TEUs-P1 30 MMTPA	<b>JNPT-COASTAL BERTH</b> Mar 2021 2.5 MMTPA
Quay Length – 680 M RMQCs – 6 (50 MT) RTGCs – 27 (15 eRTGCs) RMGCs – 3 Rail Sidings – 3 + (2 Escape) (Concession Agreement signed with M/s. J M Baxi)	Quay Length – 600 M RMQCs – 8 (60 MT) RTGCs – 29 (No eRTGCs) RMGCs – 3 Rail Sidings – 2	Quay Length LB-1 – 308 M (Draft 15 M) LB-2-250 M (Draft 10.5 M) Marine Loading Arms LB-1 - 6 Nos. LB-2 – 4 Nos.	Quay Length – 450 M (Draft 10 M) Cargo Handled- Break Bulk, Chemicals, Cement & Coastal	Quay Length – 712 M RMQCs – 10 (65 MT) RTGCs – 30 (No eRTGCs) RMGCs – 3 Rail Sidings – 3	Quay Length – 330 M RMQCs – 4 (65 MT) RTGCs – 16 (All eRTGCs) RMGCs – Nil Rail Sidings – Nil	Quay Length – 1000 M RMQCs – 12 (65 MT) RTGCs – 30 (No eRTGCs) RMGCs – 4 Rail Sidings – 4 + (1 Escape)	Quay Length – 250 M (Draft 11 M) Capacity for handling Liquid Cargo of 1.5 MTPA and General Coastal Cargo of 1 MTPA

# Bulk Chemical Handling Facilities at JNPA

- At present JNPA is handling the liquid cargo at existing Liquid Bulk Terminal with twin side berthing facilities. (LB1/LB2).
- This terminal has a Rated capacity: 7.2 Million Tons.
- Shallow Water Berth (SWB02 /03) is also used for handling Liquid Cargo.
- The Liquid Terminal is operating at very high Berth Occupancy resulting in high pre-berthing detention.

Chemicals	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
A. ACID	143784	113957	122776	124035	165769	184348
ACETONE	26555	32304	21538	2488	3906	10510
BUT ACETATE	4088	1735	4282	4647	8081	13405
CAUSTIC SODA			19518	8163	8289	37791
CAUSTIC SODA[E]					2300	8316
CG	5710	8625	1478	3920	10015	4272
IPA	4384	5955	11250	23602	42158	27215
MDC	16981	18388	13873	24881	21106	22319
MEG	90556	43039		4562	27157	19723
MEG [E]	5084				12109	10524
METHANOL		27703	16111	15772	28152	66139
MIX XYLENE	12580	17163	17233	29019	41246	51632
PH ACID	87513	279012	263125	228412	285832	244454
PHENOL	22481	23966	18071	11498	10729	14557
SM	43289	66372	65747	67521	70347	88062
TOLUENE	37316	28517	11353	29852	99528	92483
VAM	17339	27009	22019	31509	36008	31111

- There are 27 pipelines, four are utility lines, two are LPG lines, six are used for edible oil (or molasses), nine used for POL, One for Crude oil and five are used for chemicals.
- Liquid Storage Capacity created by Tank Farm Operators (TFO) 7.56 Lakh KL in an area of 54 Ha leased land and JNPA has also earmarked land for future Liquid Storage Tanks.
- Liquid Cargo is being handled by Tank Farm Operators through their own dedicated pipelines.
- JNPA introduced Common User arrangement for the use of existing Pipelines to utilize pipelines for new TFO's.
- The evacuation of liquid cargo is done by road/rail/sea connectivity. Presently M/s. Ganesh Benzoplast, M/s. BPCL & M/s. IOTL are having rail handling facility for handling liquid bulk Cargo.
- JNPA is developing an additional dedicated liquid cargo handling facilities at proposed LB3/LB4 with a capacity of 4.5 MTPA. The work is expected to be completed by June 2023.

# Existing Facilities at JNP



SR. NO	Handling Terminal	TRAFFIC IN TONNES	
		2020-21	2021-22
1	<b>BPCL</b>	<b>56,21,105</b>	<b>51,97,105</b>
2	LIQUID BULK - JNPT- AT SHALLOW BERTH	5,31,252	7,86,103
	<b>TOTAL</b>	<b>61,52,357</b>	<b>59,83,208</b>

# Evacuation Corridor

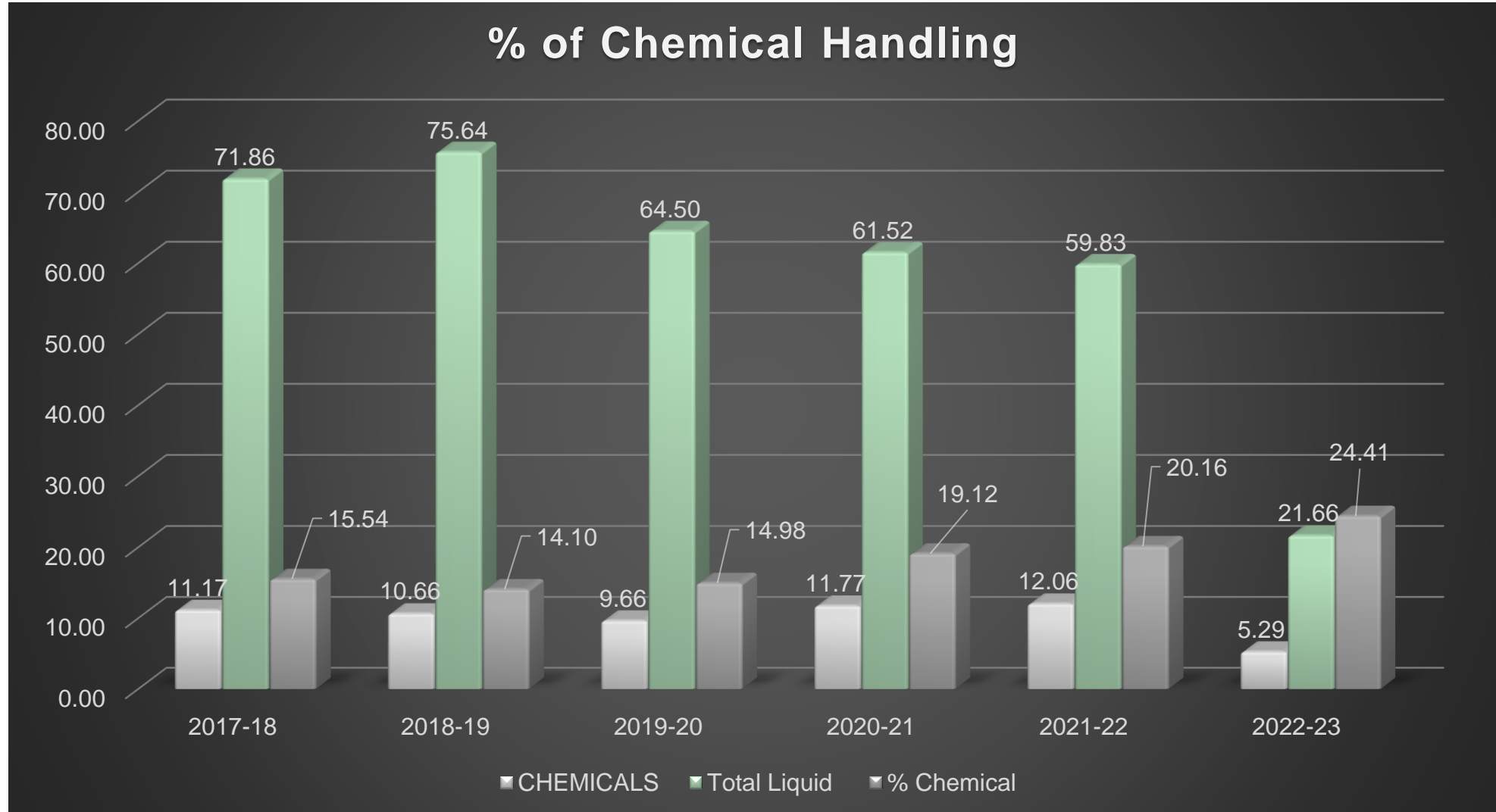
As present 70 types of chemicals and others liquids are handled in JNPA Liquid Terminal.

Information is available on 53 chemicals and these are grouped further as:

- Inorganic Acids (2),
- Inorganic Alkali (2),
- Organic Alcohol and related Chemicals (21)
- Organic Acids and Chlorides (6),
- Aromatics (12),
- Hydrocarbons (5) and
- Acrylates/esters (5).



# % of Liquid Chemical Handling at JNPA



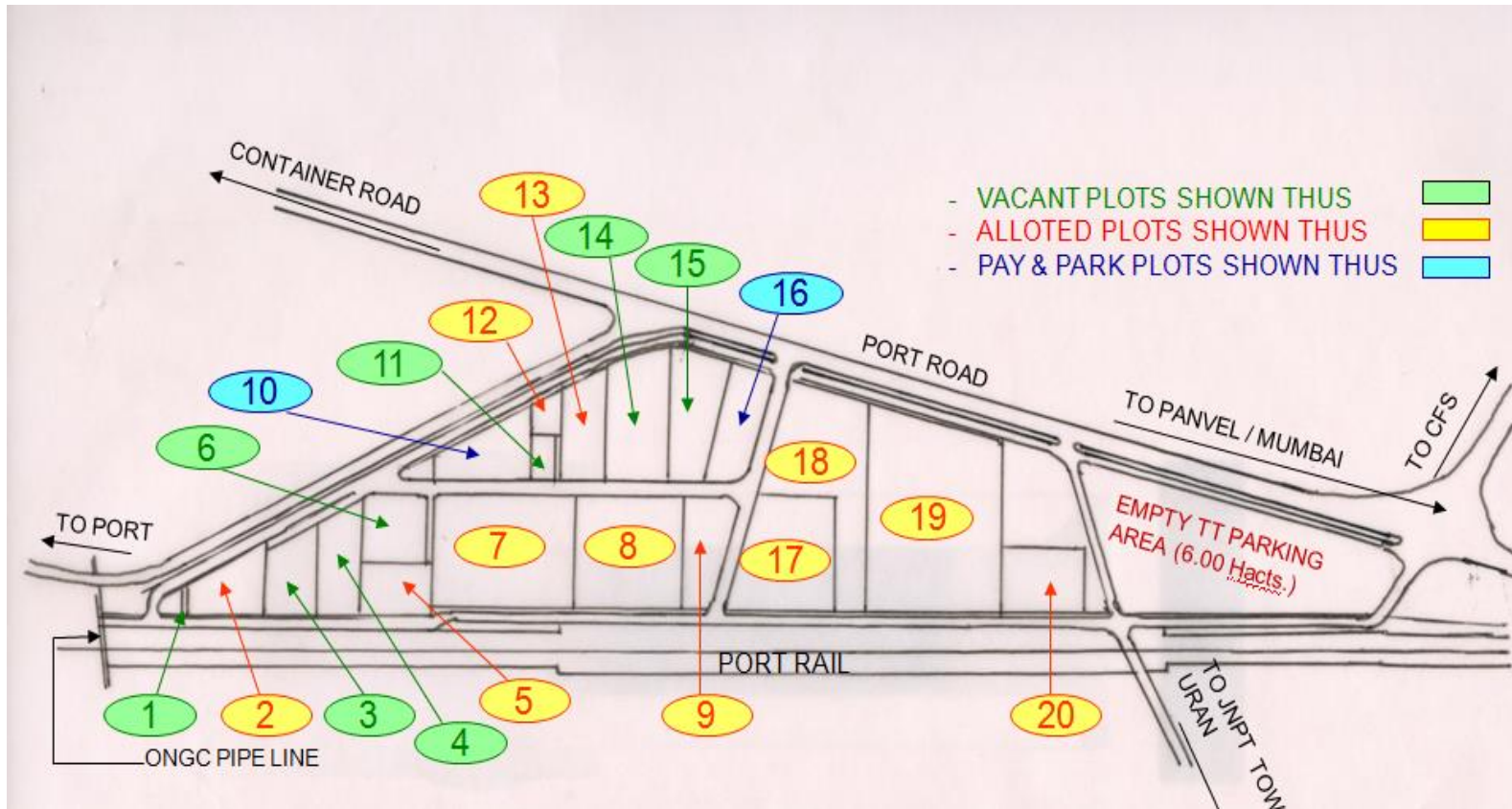


# Pipelines at Jetty Liquid Terminal

Sr. no	Owner	Pipe MOC	Service
1	BPCL	MS	White oil (WO1)
		MS	White oil (WO2)
		MS	Black oil (BO)
2	IOTL	MS	White oil (WO)
		MS	Black oil (BO)
3	RIL	MS	SKO, RKO, NAPHTHA, ATF
4	SIMPL	MS	BASE OIL
5	DF	SS	Phosphoric acid
		SS	Ammonia
6	IMC	MS	Black oil (BO)
		MS	Edible oil (EO)
		SS	Chemical\POL
		MS	Base Oil
7	SAL	MS	Edible Oil
		MS	Edible Oil
		SS	Base oil, EO
8	GBL	MS	Molasses, EO
		MS	Edible Oil (EO)
		SS	Chemical
		SS	Chemical
9	BPCL	MS	LPG
		MS	LPG
10	ONGC	MS	Crude oil
11	BPCL Service Lines	MS	Sea Water
		MS	Air
		SS	Foam Line
		GI	Fresh Water

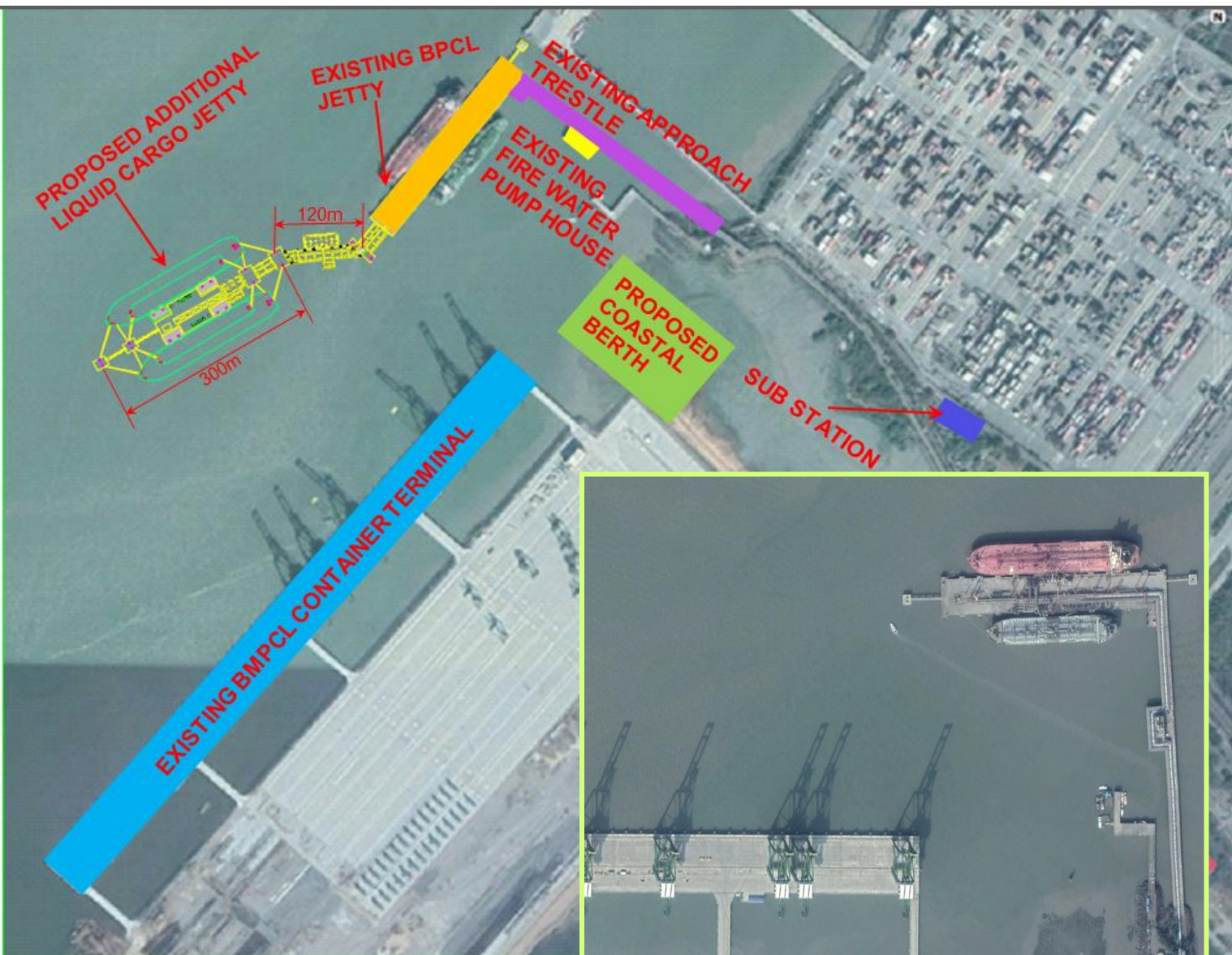
Sl. No.	Cargo Type	Number of entities
1	Edible Oil+	6
2	POL	9
3	Chemicals	5
4	LPG	2
5	Service Lines	4
6	Crude	1
	Total	27

# LIQUID STORAGE - CAPACITY



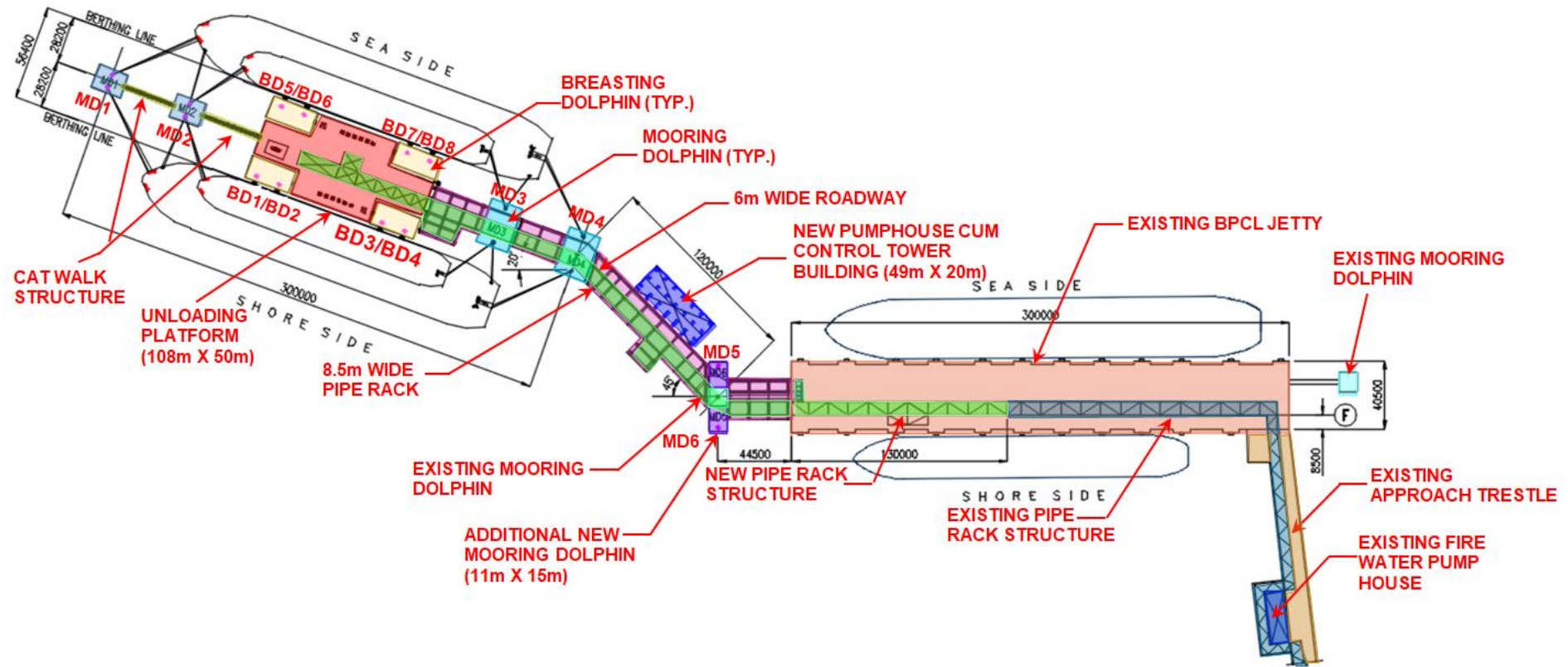
- At Present an area of 54 Ha is earmarked for Tank Farm
- Any requirement of additional Liquid Storage can be met provided as JNPA has earmarked area for future Tank Farm
- Storage Capacity

# Development of Additional Liquid Cargo Jetty



- ❖ To meet the growing demand of the liquid cargo JNPT has decided to develop a twin berth liquid jetty of 4.5 MTPA capacity
- ❖ Capable to handle 70,000 DWT vessels on one side and 25,000 DWT vessels simultaneously on both sides of the jetty.
- ❖ EPC Contract Cost: Rs. 190 Crores
- ❖ The EPC work is award to M/s. ITD Cementation at award cost of Rs. 181 Crs.
- ❖ Date of Signing of Agreement: Jan. 2020 (30 Months)
- ❖ Date of commencement: Feb. 2020
- ❖ Benefits of the Project : Waiting period of vessels shall be reduced.
- ❖ Thereafter, it is proposed to outsource the O & M operations.
- ❖ Expected date of completion is May 2023

# OVERALL JETTY LAYOUT AND ALLIED FACILITIES



# Chemical commodities handled in containers

## Chemical commodities handled in containers during the period Jan 22 to Jul 22

**CHEMICAL COMMODITIES**

**IMPORT**

**EXPORT**

**Total in TEUs**

**187081 TEUS**

**135543 TEUS**



# Implementation of Measures Towards Ease of Doing Business

## IMPROVEMENT OF INFRASTRUCTURE

- ❖ Capacity Addition (MMTPA)
  - BMCT Phase-2- 30 MMTPA (Apr 2025)
  - Coastal Berth – 2.5 MMTPA (Mar 2021)
  - Liquid Terminal – 4.5 MMTPA (Jun 2023)
- ❖ DFC Compliant Integrated Common Rail Yard
- ❖ Dry Ports at Jalna & Wardha
- ❖ Centralized Parking Plaza
- ❖ Port Led Industrialization Through SEZ
- ❖ Road & Rail Connectivity Projects

## SIMPLIFICATION OF PROCESSES

- DPD- 63.34% in 2021-22
- DPE- 43.10% in 2021-22
- Dwell Time (Import) – 20.9 Hrs (Best in India)
- PGA Labs in Port proximity
- ITRHO – 50% reduction in import dwell time of ICD cargo
- Scanners to reduce Dwell Time
- E-marketplace: 51,907+ TEUs
- ITT: 1.1 Million+ TTs availed
- Green Channel for Reefers

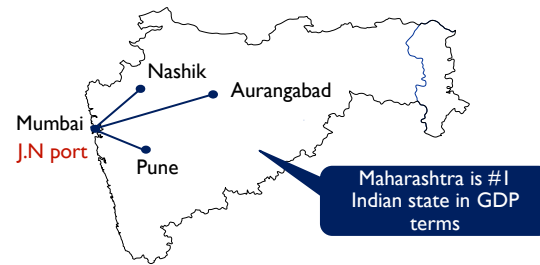
## DIGITISATION

- RFID based Gate Automation
- Upgradation of TOS
- PCS-1 to PCS-1x.
- Logistic Data Bank – Tracking
- E-DO
- Web forms 11 and 13
- On-line Berthing / Un-Berthing
- Mobile APP

# Port Led Industrialization Through JNPT SEZ

- Total Area: 277 Ha for manufacturing, FTWZ, warehousing and services
- Target industries: Pharma, Electrical and electronics, Automobile and auto components, Food processing
- Work for Basic infrastructure of Phase-1: Rs. 565 crores
- Operational since 24<sup>th</sup> June, 2020.
- 6 Units of MSME in JNPA SEZ have started operations

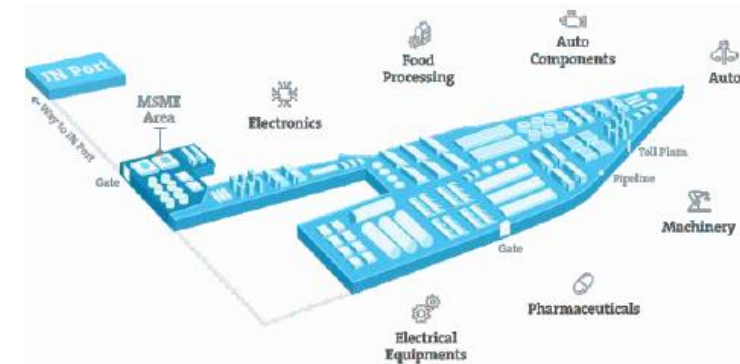
Best conduit to the industrial hubs of Maharashtra and to the Indian hinterland



Connected to major global economic hubs



## Schematic of JNPT SEZ



- Plots allotted: 28 (MSME- 26, Free Trade Warehousing Zone (FTWZ) – 2)
- Attracting an investment of approx Rs 4000 Crs and likely to generate approx 57,000 jobs through the industrialization
- Single Window Clearance System



**Thank You!**

