



## LOADING AND DISCHARGING PROCEDURE OF DANGEROUS CARGOES

### 1.0 OBJECTIVE AND SCOPE

This procedure determines Facility production process to protect raw materials and product quality, to prevent damage to products and business, to inspect, test and maintain the equipment of Facility, to reduce the damage to the environment and human health during the production process.

### 2.0 DEFINITIONS

- In Facility in which fertilizer raw material discharge and product loading, materials mainly loaded/discharged as follows:: Sulphur, Phosphate Rock, Ammonia, DAP, NPK, NP, CAN, KCL, Sulphuric Acid, Phosphoric Acid, Ammonia and etc. are mainly handled materials.

- Loads handled subject to IMDG code in our port as follows:

Sulfuric Acid -UN 1830

Phosphoric Acid-UN 1805

Ammonia-UN 1005

AN Fertilizer-UN 2067

### 3.0 RESPONSIBLE

For the implementation of this procedure, Terminal Directorate, shift supervisors affiliated to Terminal Directorate, Material and Procurement Directorate and Maintenance and Repair Directorate are responsible for the first order; HSE specialist and Dangerous Goods Safety Advisor are responsible for the follow up procedures applied.

**Following personnel are responsible for the handling of dangerous goods:** Pls see attch.1

### 4.0 IMPLEMENTATION

#### 4.1. Planning of Ship Operations

It is made, applied and monitored in accordance with production and sales processes.

#### 4.2 Activities

Ship Operations, Production Activities are implemented in accordance with Production process slow;

- \* Carried out in accordance with the Operation Instructions.

- \* Terminal Directorate prepares a report at certain intervals evaluating the production activities and presents it to the senior management.

#### 4.3. Operation of facilities and processes,

In Shipment – Discharge Unit,

- \* Raw material / product quantities are prepared according to production and sales program.

- \* Ship program is made out on a monthly basis according to the program.

- \* Ships to be arrived are notified by the Trade Department.

- \* Approval of ships to be arrived is granted by the Terminal Directorate.

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- \* Conveyor hatches and conveyor preparations are made according to the load which was brought and/or to be taken away by approved vessels
- \* Before the arrival of the ship, crane, conveyor etc. equipment are worked idle. In case of any negativity, it is eliminated before the ship arrives.
- \* Before arrival of ship, Form-010 was ordered from ship by agents with pre-arrival forms.
- \* In case the incoming vessels are chemical tankers and / or ammonia tankers, pipelines, loading arm and couplings checks are made/cause to be made.
- \* Ships are docked with port pilot towing boat and are connected by ropes.
- \* Vessels passing through Customs and Police Control are loaded / unloaded according to Ship Cargo Plan.
- \* For chemical purchases and sales, Procedure 008- Documentation Control and Registration, Chemical Material Management Procedure is applied.

#### 4.3.1 Commissioning of the system,

Plant is commissioned by using PLC system based on automation.

- \* Conveyor belts works with lock system in conveyor discharge system with scaffold winch. When one of the belts in the discharge system does not work or it stops, all the bands behind stands.
- \* When it is seen that the belt is working, scaffolding winch takes the cargo from ship's hold and transports it to the warehouse via bunker on the conveyor belt.
- \* Issuance of the relevant declaration of conformity before discharge of Dangerous Goods; For Port Procedures, 24 hours before the arrival of Load necessary approvals are taken from erdek Food Agriculture and Livestock District Directorate for AN Fertilizer and Port Authority of Bandırma is informed for other dangerous goods.
- \* Before all of the loading / unloading operations begin, the MSDS Form shall be requested from Company which will bring the load by trade department and it shall be forwarded to BAGFAŞ Port Authority. Port Authority encloses MSDS Form relating to load to a place on which employees can see during discharge.
- \* Procedure 005- Port Maintenance Procedure and Procedure 006- Hot Working Procedure are applied in maintenance and repair works.

#### 4.3.2. Liquid Load Discharge:

Dangerous liquid loads handled in BAGFAS port are phosphoric acid and sulphuric acid.

- Permission for edge in with dock is taken, Port Directorate communicates with the ship agent and ship edges in with dock.
- After the ship customs checks are done, the ship agent is informed about the completion of the transactions.
- Operation is planned by communicating between ship's captain and Port/ Terminal Directorate. Ship/shore safety control list form-04 will be completed. MSDS forms of the material to be handled are posted in the control room of scaffold.
- Valves, pipelines on dock are checked. It is checked whether the valves are closed.
- BAGFAS Personnel completes personal protective equipment before operation begins.
- Flow meters which meter how many discharge are made from line in Shipment Discharge control room are connected with PLC system.
- Liquid bulk loads are handled in such a way that they do not enter into a dangerous reaction with other dangerous materials.
- Discharge is started with low capacity and if there is no problem, capacity is increased with control and discharge continues with full capacity. In agreement with the ship, discharge / loading is carried out at the appropriate pressure and level.
- When the discharge is completed, the liquid handled in the pressurized line is taken to ship tank by blowing

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air. Pressure end in the line is checked from the PLC system and the discharge is completed.

- Vessels approaching port are not allowed to clean their tank at the port of BAGFAS.
- The ship's captain and the Terminal Directorate communicate with the exproff radios throughout the operation.
- Master is responsible for ship's crew.

#### 4.3.3. Stopping Discharge In Liquid Load Discharge Emergency Cases

- In case any leakage or spillage, Procedure 007-The Accident Procedure and Procedure 002- The Incident Reporting Procedure are applied,
- In case of any spillage, Procedure 012-Waste Management Procedure is applied to clean spilled material.
- In case of any accident procedure Procedure 011- Sulfuric Acid and Phosphoric Acid Burns procedure is applied.
- Procedure 004- Emergency procedure is applied to prevent accidents, fire following, or subsequent accidents.
- Stop the discharge process in a controlled way for all emergency situations:
  - \* Ship Master and Terminal Directorate communicates with exproff radios and starts the operation of stopping the evacuation
  - \* Ship discharge pumps and pumps belonging to BAGFAS Port are stopped via PLC system.
  - \* All valves on the port are closed.
  - \* Pressurized air is transferred to the ship's tank in the remaining acid. Emergency release couplings are pulled from the wires.

#### 4.4.4. Ammonia Discharge:

BAGFAS Port purchases ammonia in liquid state and it does not load or sell carry ammonia to ships.

- The ship is allowed to edge in with pier, the Port Directorate communicates with the ship agency, and the ship edges in with pier. Procedure 003 - The degassing procedure is applied for any gas accumulation.
- After the ship customs checks are done, the ship agent is informed about the completion of the transactions.
- Operation is planned by communicating with the ship's captain to the Port / Terminal Directorate. Ship/shore safety control list form-04 will be completed. The ammonia MSDS Form is suspended in the pier control room.
- Located on the pier; valves, pipelines are checked. It is checked whether the ventilators are closed.
- BAGFAS Personnel completes personal protective equipment before operation begins.
- Flowmeters which measure how much fluid is evacuated in the control room depend on the PLC system.
- Discharge is started with low capacity and if there is no problem, capacity is increased with control and discharge continues with full capacity. In agreement with the ship, discharge/ loading is carried out at the appropriate pressure and level.
- When the discharge is completed, the liquid handled in the pressurized line is discharged to the ship tank by blowing air.
- Even the pressure is checked from the PLC system and the discharge is completed.

#### 4.3.5. Stopping Ammonia Discharge During Emergencies

- In the event of any leakage or spillage, Procedure 010 - Ammonia Leak - Explosion Procedure and 002 - Incident Reporting Procedure are applied,
- Procedure 004- Emergency procedure is applied to prevent accidents, fire following, or subsequent accidents.
- Stop the draining process in a controlled way for all emergency situations:
  - \* Ship Master and Terminal Directorate communicates with exproff radios and starts the operation of stopping

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the evacuation

- \* Ship discharge pumps and pumps belonging to BAGFAS Port are stopped via PLC system.
- \* All valves on the port are closed.
- \* Ammonia remaining in lines with compressed air is transferred to ship tank. Emergency release couplings are pulled from the wires.

#### **4.3.6. Hazardous Substance Solid Handling:**

Solid dangerous cargo handled at BAGFAS Port is AN fertilizer.

- The ship is allowed to edge in with pier, the Port Directorate communicates with the ship agency, and the ship edge in with pier.
- After the ship customs checks are done, the ship agent is informed about the completion of the transactions.
- Operation is planned by communicating with the ship's captain to the Port / Terminal Directorate. AN Guideline MSDS Form is suspended in the control room of the scaffold.
- BAGFAS Personnel completes personal protective equipment before operation begins.
- Pier components, conveyor belt lines and emergency stop wires are checked.
- Discharge is started with low capacity and if there is no problem, capacity is increased with control and evacuation continues with full capacity.
- Conveyor lines are monitored via the PLC system via cameras.
- At the end of the discharge, pier conveyor belt line and pier top are cleaned. The cleaned impurities are sent to the plants again with the help of scoop for fertilizer construction.
- Hazardous gas emissions which may occur during the handling of dangerous solid bulk goods, explosive / flammable dust and intense dust formation, self-contained or combustible materials, oxidizing substances and can not be handled together with each other, stored separately and stored without separator between them. In emergencies, hazardous substances standing next to each other are removed from each other.

#### **4.3.7. Stopping of Discharge In Case of Dangerous Solid Load Handling and Emergencies**

- For bulk solid loads, hourly and instantaneous values are taken with the scales on the conveyor belt and recorded. The conveyor belt gallery is observed by the shift staff. In addition, the loading operation can be monitored remotely with the camera system.
- Scaffold winch is stopped by the operator pressing the crane emergency stop button. The conveyor belts are stopped by pressing the emergency stop button from the panel room.
- If the stop button does not work, the emergency stop wires on the conveyor lines are pulled, each conveyor line automatically stops the next one and the evacuation stops.
- With the Exproff radio, the Terminal Manager informs the captain of the ship that the evacuation has been stopped urgently
- In the event of an accident or fire Procedure 009- Port Facility AN Guidance Burst Procedure is applied.

#### **4.4. Dangerous Load Inspection / Discharge / Sampling Method:**

- Before entering the dangerous cargo stacking area, the PPE specified in the required MSDS form is worn,
- Samples are taken under the guidance of the Terminal Military.
- MSDS Form When requested by the Port Operator, hazardous cargoes must be submitted by cargo holders before entering the port area.
- It is prohibited to smoke, fire, or generate sparks in coastal storage areas of freight forwarders and docks and

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dangerous cargoes in docked vessels carrying dangerous goods.

- Flammable materials are kept away from spark-forming operations and tools and tools that generate sparks in the dangerous cargo handling area can not be operated.
- No maintenance and repair activities can be undertaken without obtaining work permits from HSE Specialists.
- In the gas measurement and degassing works and transactions, the transactions are carried out in accordance with the Ministry of Maritime Affairs and Communication's IMDG Code Implementation Regulation dated 23.09.2013 and numbered 2013/180.

#### 4.4 Maintenance & Repair Activities

A weekly and annual Revision Maintenance Plan is prepared for the maintenance and repair activities of the equipment. In accordance with this plan, it is ensured that the services are carried out by the related services.

Procedure in Maintenance and Repair Procedures 005- Port Maintenance Procedure and Procedure 006- The Hot Work Procedure is applied.

##### 4.4.1. Pier Lines Material properties

DN300 = Insulated Ammonia Line Material: TTSt35N

DN100 = Insulated Ammonia Cooling Line Material: TTSt35N DN200 =

S.Asit Line Material: Steel (St37-2)

DN200 = F.Asit Line Material: Stainless Steel

#### 4.5 Calibration activities

If the calibration of the measuring devices which may affect the Service Quality is requested or is made by the measurement control team at the revision stops.

##### Personnel who are responsible for the handling of dangerous goods: Attch.1

DUTY	NAME SURNAME	TELEPHONE
PORT MANAGER	HALİT KAMBUR	05498128813
<b>A-SHIFT</b>		
SHIFT SUPERVISOR	ZAFER YALÇIN	05335405390
CONVEYOR WORKER	ADNAN TÜREDİ	05539202748
<b>B-SHIFT</b>		
SHIFT SUPERVISOR	ENGİN ESERAY	05050033592
CONVEYOR WORKER	HAŞİM AYGEN	05424356607
<b>C-SHIFT</b>		
SHIFT SUPERVISOR	ERTAN KOCABIYIK	05458065141
CONVEYOR WORKER	ÖZER TURHAN	05464988923
<b>D-SHIFT</b>		
SHIFT SUPERVISOR	MUSTAFA TUNCAY	05358811531
CONVEYOR WORKER	HAYRETTİN ABA	05366044665

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