ARIaNA SANAT
ZAFARAN CO.

www.aszc.ir

Bulk Material Handling, Storage
and Reclaiming Technology

www.aszc.ir

THE COMPANY

While we have several years of experience to hand over different Projects to the End-users in bulk material handling and storage units of Petrochemical as wel as oil and gas refinery as Zafaran Co., ARIaNA SANAT ZAFARAN CO. is a new established company and an independent legal entity as well as an unofficial subsidiary of above mentioned esteemed company which is providing turnkey solutions to Client for S ulfur/Sulphur as well as bulk material handling (Belt Conveyor, Bucket Elevator, Stacker, Tripper Car, Reclaimer, etc.) and storage (Silo, stack yard, etc.) units of Petrichemical, Mine and Industrial Plants as well as oil and gas refinery.

ARIaNA SANAT ZAFARAN CO.

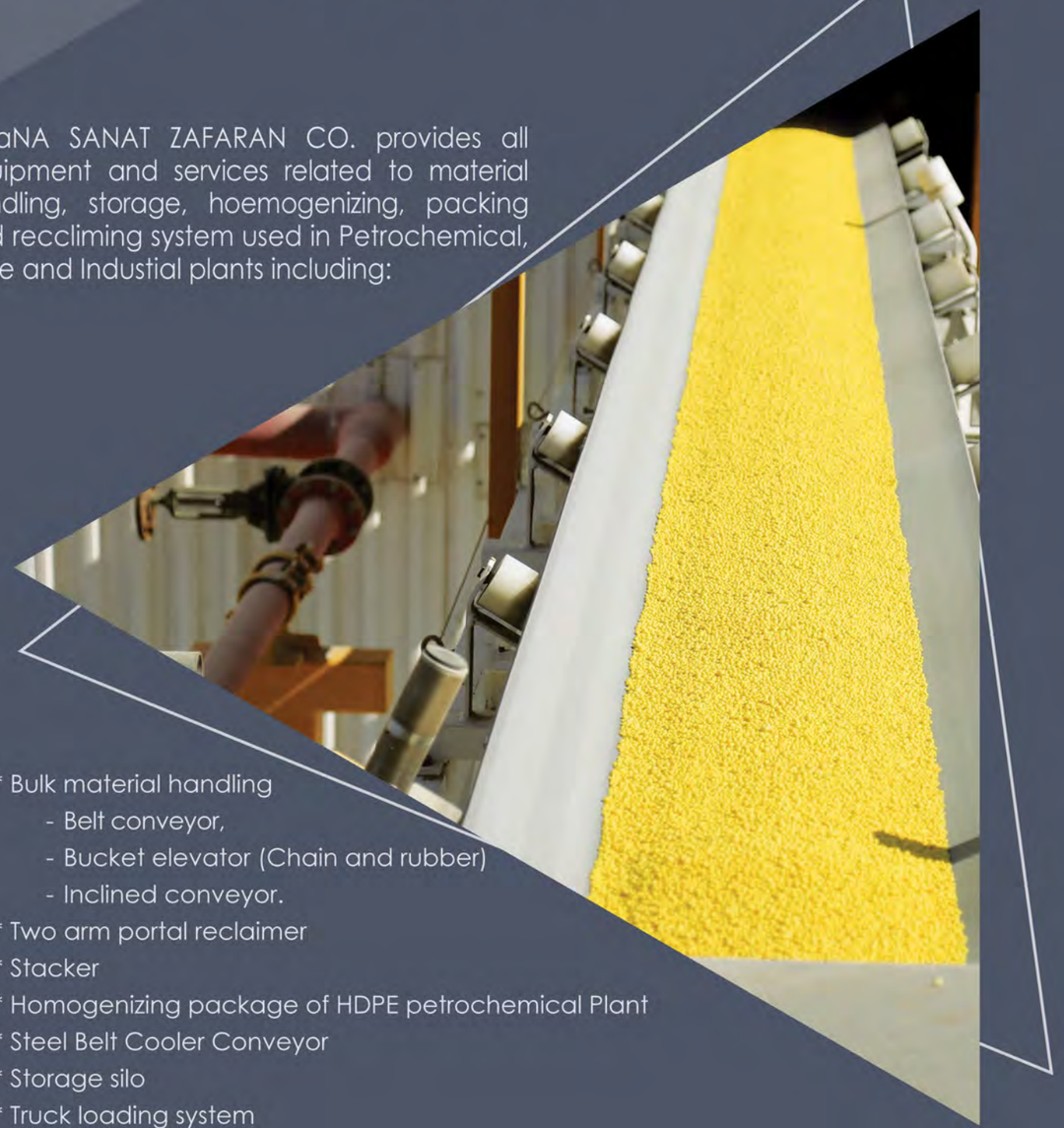
Some EP and EPC projects have been already done. Installed equipment such as belt conveyor, Bucket elevator, Vibration screeners, stacker, etc. for different plants within last 8 years is capable to handle more than 60,000 Tons per day bulk material as well as lump crushed substances; in addition, storage equipment may ne used to store More than 35,000 tons of bulk material as well as lump crushed substances with safe, reliable, flexible and efficient services.

Furthemore, we are the first and single Iranian company who design and manufacture two arm portal reclaimer.

ARIaNA SANAT ZAFARAN CO.

1
Material Handling, Storage and Reclaiming System

ARIaNA SANAT ZAFARAN CO. provides all equipment and services related to material handling, storage, hoemogenizing, packing and reccliming system used in Petrochemical, Mine and Industial plants including:



* Bulk material handling
    - Belt conveyor,
    - Bucket elevator (Chain and rubber)
    - Inclined conveyor.
* Two arm portal reclaimer
* Stacker
* Homogenizing package of HDPE petrochemical Plant
* Steel Belt Cooler Conveyor
* Storage silo
* Truck loading system
* Vibration screener
* Crusher
* Diverting gates

2 Rubber belt Conveyor

Conveyor belt systems are mechanical devices which is used to transport objects, they are common throughout all industrial applications. it is used in most material handling industries for transporting bulk materials, or packets and parcels.

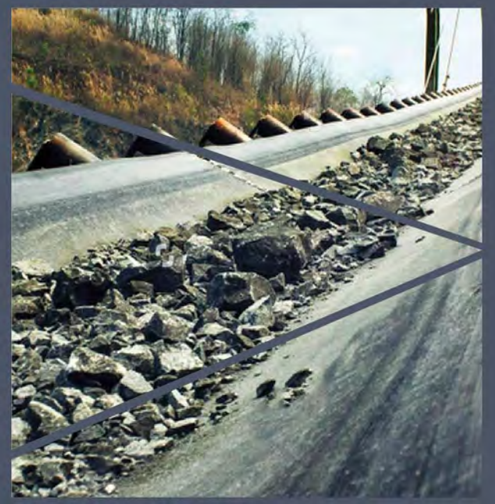
The right bulk material handling system can add automation and fluidity to any application . We offer a diverse range of optional equipment to complement our conveying systems in order to provide you with a complete system designed to handle your specific material.
Belt trippers, weighing units, reclaiming equipment loading shelters and load out systems for trucks, rail cars, and barges are all available.

3 Selecting a belt Conveyor type

THERE ARE DIFFERENT PARAMETERS WHEN A CONVEYOR TO BE FINALIZED IN ORDER TO INSTALL IN A PLANT AS DESCRIBED BELOW.

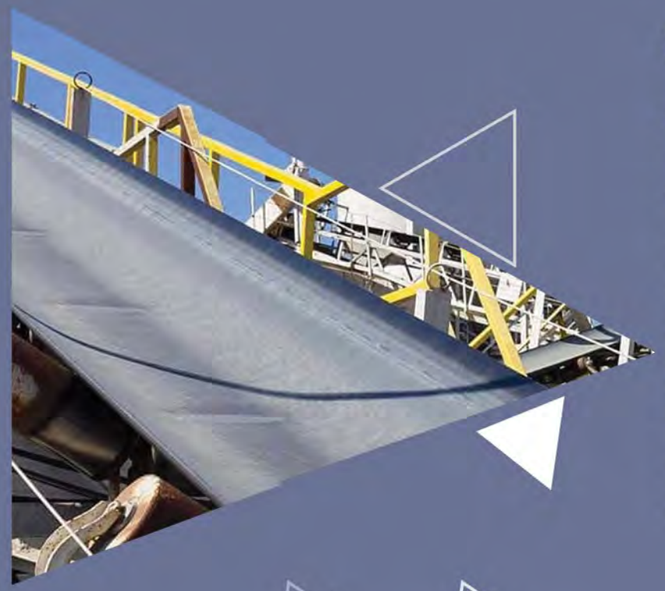
3.1 Conveyed product

The conveyor is selected while taking into consideration the product weight, the distributed load, the overall load, the dimensions and the product transport position. Specific product properties such as temperature, sensitivity to shock, whether the product contains oil or has sharp edges also influence the selection.



3.2 Transport route

The most suitable conveyor system is determined based on whether the product is conveyed with a specified orientation or without a particular order and whether it is conveyed straight, around a curve or onto another level. The transport output quantity (i.e. speed) also influences the selection.



3.3
Ambient conditions

When configuring a conveyor, we assume the usual ambient conditions in the production facility. That is, the application is indoors at temperatures of -10 °C to +60 °C. Low temperatures down to -20 °C are possible on request. Ambient temperatures above 80° C are only briefly permissible for most plastics. Ambient temperatures higher than 150° C are only permissible for aluminium base structures after testing. However, the temperatures for contact between the product and transport medium of up to 200 °C are possible when using steel chains.

3.4
Duty type

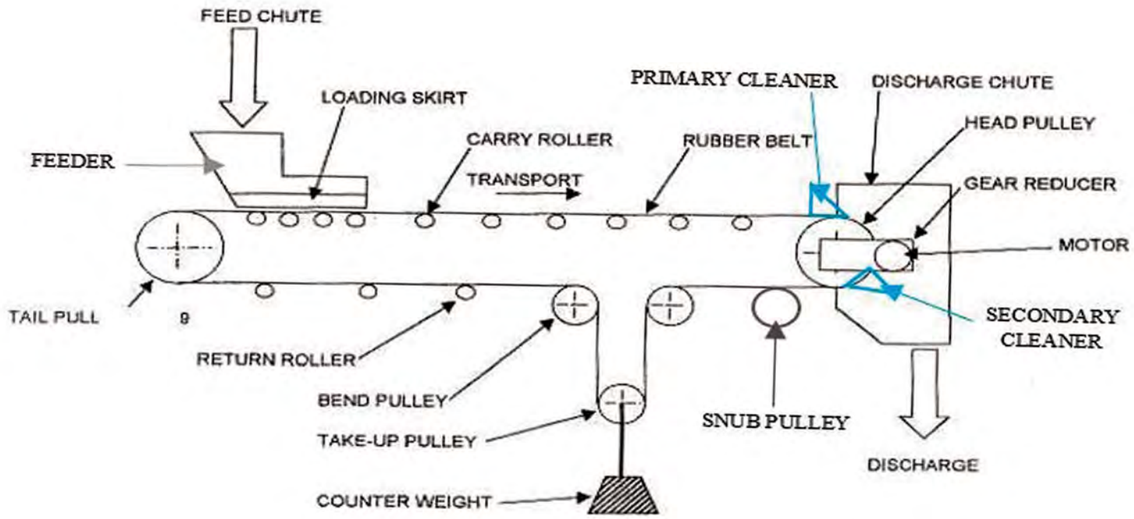
The conveyor configuration ultimately depends on the duty type. In continuous operation, the conveyor and the product run without interruption. The goods to be conveyed are fed onto the running conveyor.

During accumulated operation, the conveyor continues to run below the accumulated product. For example, twice the motor power is required in this case.

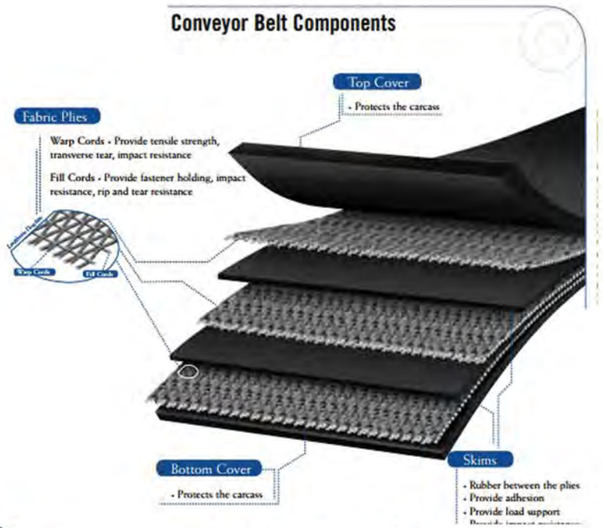
4
"Component of rubber belt conveyor"

A RUBBER BELT CONVEYOR MAINLY INCLUDES DIFFERENT PARTS AS FOLLOW:

- Rubber belt
- Rollers, Impact zones and troughing sets
- Counter weight and tensioning systems
- Snub, drive and driven Pulleys
- Belt cleaners
- Pylons and structure
- Covers



4.1
Rubber Belt



A typical configuration of rubber belt

Following data are presented based on information which is provided by SIG co. for different services of rubber belts in order to use rubber belt conveyor in different application.

4.1.1 Abrasion Service

A variety of Rubber belt have great abrasion resistivity and it is excellent choice for long-time services in abrasive services. More data are available in the summary table to select proper option.

4.1.2 Fire resistant

Some types of rubber belts are self- extinguished or fire resistant in order to guarantee high safety to the conveyor plant as described more in the table.

4.1.3 Oil Service

There are some types of oil resistance rubber which are suitable for different purposes as described in relevant tables.

4.1.4 Heat Service

Different types of rubber belts are developed in order to resist against high temperature of bulk material in handling system. More data is presented in the table at a maximum working temperature of 200 °C with peaks of 300 °C.

	Abrasion service			Heat service			Oil service			Fire resistant	
	CL	EC	AS	CX	MX	TX	OM	OH	PL	AG	BS
Abrasion	***	****	****	***	***	***	*	*	*	*	***
Cut & tear	***	****	***	**	**	**	**	**	**	**	***
Fire	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	****	****
Animal & vegetable oils	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	****	****	****	****	N.A.
Mineral oils	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	***	****	***	**	N.A.
Continuous Working Service °C											
	70	70	70	130	150	200	70	70	120	70	70
Maximum Peaks of Temperature °C											
	90	90	90	150	180	300	90	90	130	90	90
Minimum Working Temperatures °C											
	-40	-50	-40	-40	-40	-30	-35	-25	-30	-25	-40

N.A. not applicable;★ fair;★★ good;★★★ very good;★★★★excellent.

In summary, rubber belt shall be selected mainly based on capacity (width), cover characteristics and maximum working tension.

4.2 "Rollers, impact zones and troughing sets"

Types of rollers and idlers are as follow:

- Carrying rollers
- Spiral
- Impact idlers
- Return idlers
- Adjustable idlers

4.2.1FLAT CARRY / RETURN ROLLERS

Inline carry idler

offset carry idler

As part of our production range, we supply a wide range of rollers to suit most conveyor applications – engineered according to the highest industry standards. Roller material, lengths, diameters and slot options can all be tailored to client specifications.

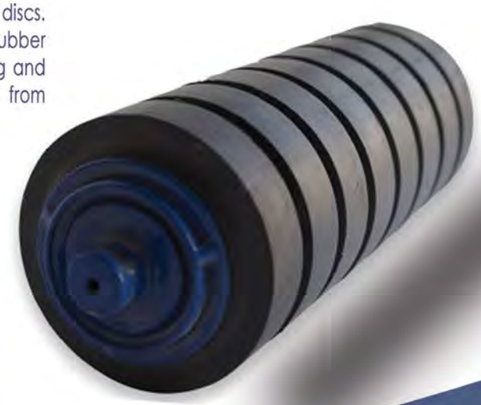
These Rollers are used to support the carrying and/or returning conveyor belt. Available in steel, aluminium, HDPE and HT composite. For further information on technical specifications including products based on international standards such as CEMA, feel free to contact us.

As a trusted name in the bulk material handling system, for over 15 years, quality and reliability of the products are trusted in different projects. The range has been designed and compiled with quality, flexibility, fast availability and cost-effectiveness in mind. Our dedicated Parts, Servicing and Engineering departments are on-hand with technical support around the clock,

4.2.2RUBBER IMPACT ROLLERS

As part of our production range, we supply a wide range of rollers to suit most conveyor applications – engineered according to the highest industry standards. Roller material, lengths, diameters and slot options can all be tailored to client specifications.

Rubber Impact Rollers are manufactured using steel shell and rubber discs. Impact rollers are manufactured as a steel shell with surrounding rubber discs. Impact idler frames and rollers are used at conveyor loading and transfer points for added protection from lump material dropped from height during the transfer process.



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Offset impact idler

4.2.3
STUB GUIDE ROLLERS

As part of our production range, we supply a wide range of rollers to suit most conveyor applications – engineered according to the highest industry standards. Roller material, lengths, diameters and slot options can all be tailored to client specifications.

Stub Guide Rollers provide increased side-wall/elevator conveyor belt life and are designed for heavy load support as part of the stub 'training' idler frame. They are specified with the proper decline rise/angle of the conveyor. Training idlers are available as part of the production upon on request.

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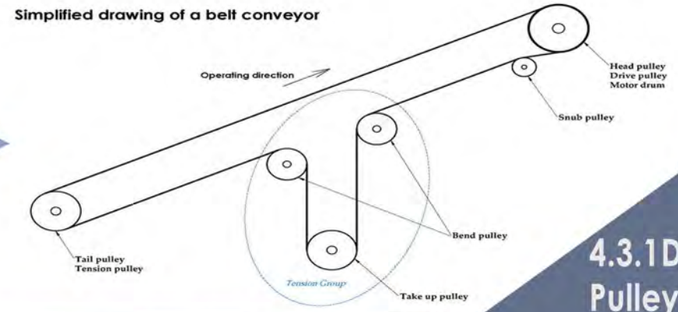
4.3 Snub, drive and driven Pulleys

Belt Conveyor Pulleys are one of the most versatile components of a conveyor system. Depending on their specifications, they can serve in a variety of roles or positions, including drive or head, return or tail, bend tensioning, snub tensioning and/or take-up pulleys. You can get Drum Pulleys and Wing Pulleys for belt conveyors here!

Ariana Sanat Zafaran co. with the view to provide our customers with the most cost effective and quality products, ensuring maximum life and minimal downtime. Our experienced service team can repair your existing pulleys, saving you time and money, as well as install your new pulleys. We can supply you with any type of repair kit or tooling you need to maintain and repair your conveying systems ensuring smooth running operations. Ariana Sanat Zafaran co. has pulleys to suit all applications and covers the entire range of requirements. Types of pullies are:

- Drive/head pulleys
- Return/tail pulleys
- Snub pulleys
- Bend pulleys
- Take-up pulleys

Our production can be engineered and constructed to suit your specific bulk material application or selected from our standard pre-engineered range. The shells are normally made from heavy wall pipe but can also be rolled to suit specific requirements. Stainless steel pulleys are also available. Our recommended method for shaftto-end disc fitting is by internal locking elements which provide a demountable key-less high torque connection. The easy release capability permits the removal of the shell from the shaft for maintenance. Other types of shaft connections are available and these include compression hub, taper fit, or welded shaft for the less critical applications.



4.3.1 Drive/Head Pulley

A Drive Pulley or Head Pulley is used for the purpose of driving a conveyor belt. They are normally mounted in external type bearings and driven by a motor and reducer. Conveyor head pulleys can be flat faced or crowned and many have lagging to reduce belt slippage. Conveyor drum pulleys, wing pulleys and spiral pulleys are the most common style of drive pulleys.

4.3.2 Return Pulley / Tail Pulley

Return / Tail pulleys are used to redirect a conveyor belt back toward the drive pulley. Conveyor tail pulleys can have internal bearings or can be mounted in external bearings and are usually located at the end of the conveyor bed. Conveyor tail pulleys commonly serve the purpose of a Take-Up pulley to keep tension on the belt.

4.3.3 Snub Pulley

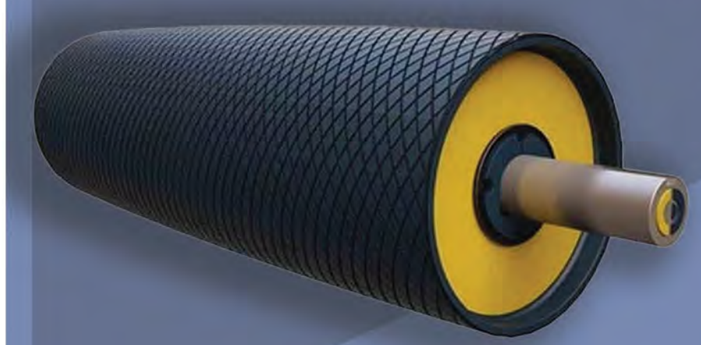
A conveyor's snub pulley used to increase belt wrap tension around a drive pulley, typically for the purpose of improving belt traction.

4.3.4 Bend Pulley

A conveyor's bend pulley used to redirect the belt and provide belt tension where bends occur in the conveyor system.

4.3.5 Take-Up Pulley

A conveyor's take-up pulley that can be adjusted in a bracket to increase or decrease belt slack or belt tension.



4.4 Belt Cleaner

There are some types of cleaners for rubber belt conveyors which are included in list of production of Arina Sanat Zafaran co. and each of them have different types as follow:

- PRIMARY BELT CLEANERS
- SECONDARY BELT CLEANERS

4.4.1 Primary Belt Cleaners

Ariana Sanat Zafaran co. and its predecessor company have a long history of large-scale projects in the bulk material handling project in different industrial plants. High-performing belt cleaners keep belts clean, eliminating carryback and making conveyor systems safer and more productive. We offer belt cleaners that work with all belt sizes and speeds, regardless of industry or type of material. We also offer belt cleaners that work in the most challenging and unique environments, such as on conveyor systems where there's minimal space around the head pulley.

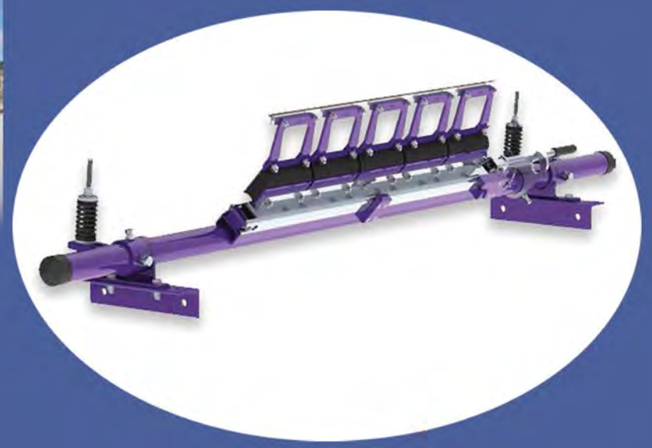
Keeping belts clean is more than just a matter of cleanliness. Installing high-quality Primary Belt Cleaners substantially improves efficiency.

Ariana Sanat Zafaran co. may supply a range of primary belt cleaners / scrapers to suit conveying application as follow:

RPC, Rockline Primary Cleaner – effective and affordable, this solid-blade belt cleaner mounts on the head pulley and features do-it-yourself installation and minimal maintenance.

MMPC Medium Mine-Duty Primary Cleaner – the ideal solution for tough applications that call for more than a standard-duty system, but don't require the aggressiveness of heavy-duty cleaner.

HCPC Heavy-Duty Cartridge Primary Cleaner – One of the most rugged cleaners on the market, the HCPC Heavy-Duty Cartridge Pre-cleaner has been engineered to handle the most abusive conditions, such as wet, sticky fire clay, whilst maintaining constant cleaning force.

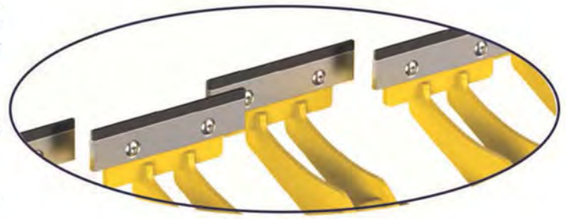


4.4.2 SECONDARY BELT CLEANERS

Ariana Sanat Zafaran co. and its predecessor company have a long history of large-scale projects in the bulk material handling project in different industrial plants.
Secondary cleaners are belt cleaners that are built to scrape materials left on the belt beyond the head pulley. Secondary cleaners are located just past where the belt leave the head pulley, and anywhere else down the beltline. Secondary cleaners are especially good at removing fines and can increase cleaning efficiency to more than 90 percent. secondary cleaners handle a variety of applications, with polyurethane, carbide, and brush options available.

Ariana Sanat Zafaran co. can supply a range of secondary belt cleaners / scrapers to suit conveying application as follow:

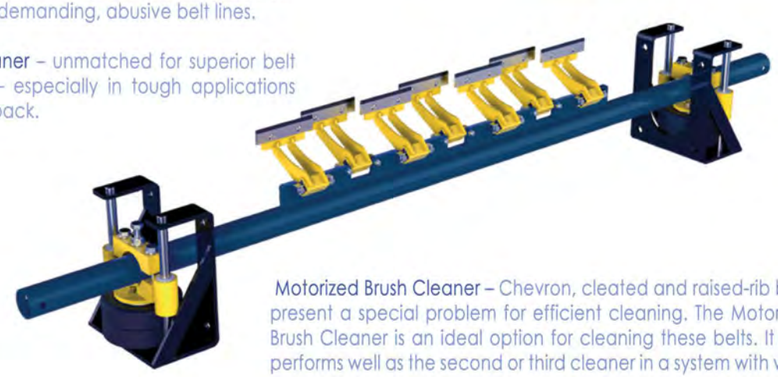
YSC - Secondary Cleaner – improves belt cleaning efficiency and reduces routine maintenance tasks. With easy, do-it-yourself installation and simple, serviceable blades, all at an affordable price, it is an ideal solution for your belt cleaning needs.



RSC, Reversing Secondary Cleaner – for superior cleaning in reversible belt applications.

HSC, Heavy-Duty and Reversing Secondary Cleaner – designed to deliver and maintain superior cleaning efficiency– even on the most demanding, abusive belt lines.

USC, Secondary Cleaner – unmatched for superior belt cleaning efficiency — especially in tough applications with wet, sticky carry-back.



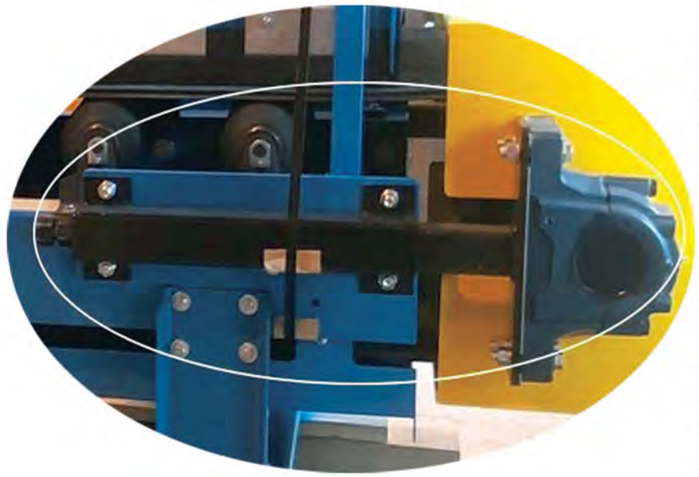
Motorized Brush Cleaner – Chevron, cleated and raised-rib belts present a special problem for efficient cleaning. The Motorized Brush Cleaner is an ideal option for cleaning these belts. It also performs well as the second or third cleaner in a system with worn

4.5 Counter weight and tensioning systems

The take-up on a belt conveyor is a key component in maintaining proper belt tension, which contributes significantly to process and mechanical stability. Proper belt tension helps to ensure that the belt wears evenly, material is contained in the trough, and the belt runs centrally over idlers.Take-up assemblies are available in many different types and styles, each offering its own advantages and disadvantages. The primary types of belt conveyor take-up are the screw (manual) take-up, gravity take-up (GTU), and horizontal take-up.

4.5.1 SCREW TAKE-UP

The screw take-up design utilizes mechanical force to take-up any slack in the belt. This is done by adjusting a threaded tensioning screw integrated into the conveyor frame on each side of the tail pulley. By adjusting the screw, the tail pulley can be either pushed outward or pulled inward.



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While various styles of screw take-up are available based on customer preference and the level of duty required, **Ariana Sanat Zafaran co.** prefers the telescoping take-up screw because of several advantages. Another style, the top-angle take-up, is also popular, but requires a much larger and heavier tail frame, as well as larger guarding.

Screw take-ups offer a cost-effective means of managing belt tension for conveyors less than 150' in length and are the standard take-up choice.

4.5.2 GRAVITY TAKE-UP (GTU)

Screw take-ups are generally not suited to accommodate the length of belt stretch that occurs in conveyors longer than 150 foot and in these settings, the gravity take-up is usually the best approach to belt tensioning.

A gravity take-up assembly utilizes three pulleys – two bend pulleys and one gravity take-up or sliding pulley – to automatically manage belt tension. A counter weight attached to the gravity take-up pulley pulls down on the belt to maintain tension via gravity. The bend pulleys direct belt slack around the gravity take-up pulley.

The self-tensioning nature of GTUs also means they require less maintenance than the screw take-up. Because the gravity take-up system adjusts automatically to changes in belt tension, it is also known as an automatic take- up

4.5.3 HORIZONTAL TAKE-UP

The horizontal take up is an alternative to the gravity take-up when space is a limitation. This type of take-up is similar to the gravity take-up, but instead of the assembly situated below the belt, it is positioned vertically behind the tail pulley. This makes it particularly useful in situations where the conveyor is positioned on a grade that eliminates any additional space under the conveyor.

Since the horizontal take-up does not fall below the conveyor, a system of pulleys and cables is used to tension the belt with a weight box. The cabling attaches to the tail pulley, which rides on a carriage, allowing it to be moved in and out of place.

The image above shows a horizontal take-up: on the left, the tail pulley and carriage are installed on the inside of the building; and on the right, the weight box (behind guarding) is installed in a structure that will direct the cabling through pulleys (at the top) outside of the building (cables not yet installed).

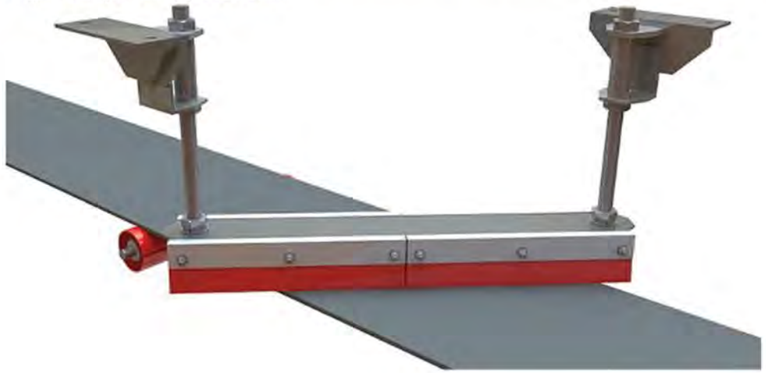
4.6 Belt Plow

Ariana Sanat Zafaran co. and its predecessor company have a long history of collaboration on large-scale projects in the bulk materials handling industries. We can supply a range of belt plows to suit virtually any conveying application, including the following types;

Diagonal Plows – to keep lumps, rocks, and other fugitive materials out of your tail pulley, or gravity take-up pulleys, try the Diagonal Plow.

Heavy-Duty Spring Tension Diagonal Plow – a heavy duty "belt cleaner" for the tail pulley, the HDST Diagonal Plow keeps lumps, rocks and other fugitive materials out of the tail pulley where they could cause damage to the belt, the mechanical splice, the lagging or the pulley.

V-Plow – an effective solution for protecting your tail pulley, as well as your mechanical splices and lagging, the V-Plow is uniquely designed to clean the inside (clean side) of your return belt.
Twin Pole V-Plow – for heavy-duty applications, designed to maximize wide and high belt speed applications.



5
WORK Experience of Bulk Material Handling, Storage and Reclaiming System

Ariana Sanat Zafaran co. and it's esteemed predecessor company are may design, procure, manufacture, install and commission following equipment in oil and gas refinery and aslo petrochemicals complex as well as mine and industrial plants:

- Two arm portal reclaimer
- Stacker
- Rubber belt conveyors
- Steel belt cooler conveyor
- Rotary Drum (Granulation Drum)
- Bucket elevators
- Storage silos
- Crushers
- Vibration screeners
- Dedusting system and cyclone
- Exhaust Fan
- Diverting gates
- Loading and unloading chute

as a reputable company in this field, several plants are using equipment for bulk material handling, storage and reclaiming system as shown in following pages.

A summary table including designed, procured, manufactured and installed items is as follow:

Project / Equipment	Esht	TSSU	PH12	BSSU	PH19	PH 17 & 18	PH20& 21	PGS	BUPC	ARUP	Total
Rubber belt conveyor	2	2	10	3	7	3	3	1	2	4	37 set
Steel belt cooler conveyor	1					8					9 set
Rotary Drum		2	3	2	2		4	2	2	4	21 set
Two arm portal reclaimer										1	1 set
Tripper car										1	1 set
Stacker and stack yard				1				1		1	1 set
Dedusting system	1	2	3	2	2	4	4	2	2	4	26 set
Bucket elevator	1		1		1	1	2		1		7 set
Prefabricated Piping (dia inch) *	2,200	4,800	11,200	5,500	8,000	8,300	9,500	4,200	6,100	12,000	~69,000 dia inch
Storage Silo	2	2	3	3	2	2	2	2	2	2	22 set
Bagging	2			2							4 set
Vibration screener			3		2		2				7 set
crusher			1		1		1				3 set
Telescopic chute			3		2	2	2		2		11 set
Steel structure*	1	1	1	1	1	1	1	1	1	1	~2500 ton
Instrument pkg*	1	1	1	1	1	1	1	1	1	1	~800 item
control system*	1	1	1	1	1	1	1	1	1	2	11 pkg.
Electrical system*	1	1	1	1	1	1	1	1	1	2	11 pkg.

*Note: Quantity is mentioned as a complete package for each project.

Steel Belt Cooler Conveyor Package

Steel Belt Cooler Conveyor (Sulphur Bentonite Package)

Capacity : 120 tonnes per day
Method: Pastillation
Delivery date: 2006
Status: Completed

Equipment:

- Steel belt cooler
- Pastillator machine
- Solidified sulphur Bentonite bucket belt conveyor
- Bentonite screw conveyor
- Lump sulphur Bentonite bucket belt conveyor
- Storage silos (product and bentonite),
- 25 kg packing system
- 1,000 kg packaging system
- Sulphur remelting tank
- Mixer vessel
- Surge vessel
- Liquid sulphur filter and pump group
- Liquid sulphur transfer pump group
- Cooling tower
- Steam generator boilers
- Controlling systems and associated instruments
- MCC and switchgear

Location: Eshtehard
Feed: Liquid sulphur from re-melting tank
Product: Sulphur bentonite fertilizer
Number of trains: 1

TEHRAN OIL REFINERY

Bulk Material
Handling and
Storage Unit

Client:	Ehsan J.V. (ODCC, IGC, D&I)
Delivery date:	2011
Status:	Completed
Location:	Tehran - Iran
Product:	Granule (spherical shape)
Storage:	2 X 250 tonnes = 500 ton silo
Capacity:	90 Tonnes per hour (Design)
Handling:	Rubber belt conveyor
Equipment:	• Rubber belt conveyor (2 sets) • Rotary Drum (2 sets) • Storage silo (2 sets) • Cyclone filter (2 sets) • Exhaust fan (2 sets) • UCP/PLC control system & instrument • VFD and switchgear • Electrical (Lighting, Earthing and Cabling)

South Pars Gas Field Development - PH12

Bulk Material Handling and Storage Unit

Capacity (Handling):190 tonnes per hour (Design)
Client:Technimont / Petropars
Delivery date:2013
Status:Completed
Location:Kangan - Iran

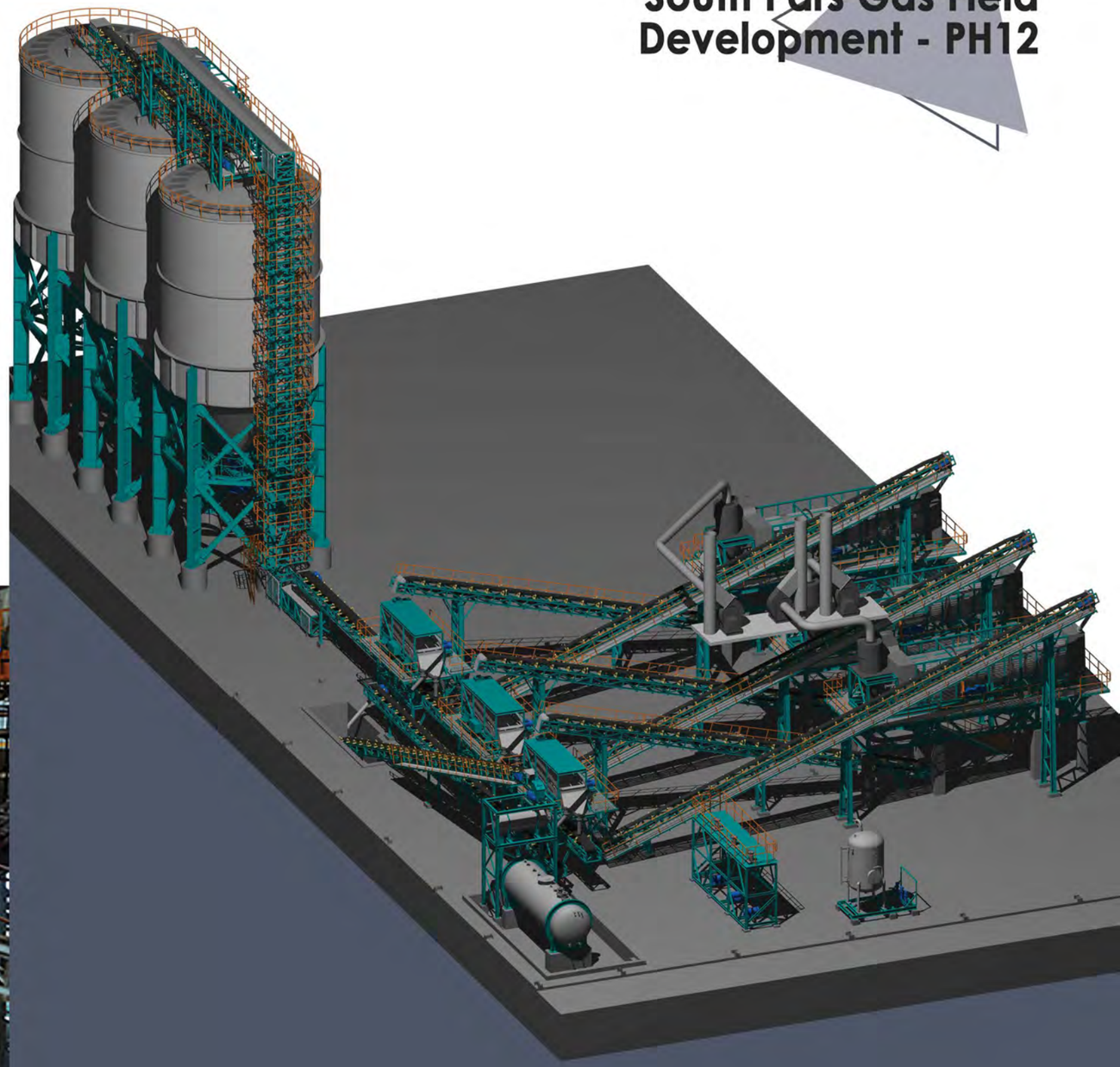
Product: Granule (spherical shape)

Storage: 3 X 750 tonnes = 2,250 tonnes silo
Handling: Rubber belt conveyor (10 sets) and bucket elevator (1 set)

Equipment:

- Rubber belt conveyor (10 sets)
- Chain bucket elevator (1 set)
- Vibration screener (3 sets)
- Rotary Drum (3 set)
- Re-melter package (3 sets)
- Storage silo (3 sets)
- Telescopic loading chute (3 sets)
- Cyclone filter (3 sets)
- Exhaust fan (3 sets)
- UCP/PLC control system & instrument
- VFD and LCS

South Pars Gas Field Development - PH12



Bandar Abbas Refinery

Bulk Material Handling, Storage and stack yard Unitt

Equipment:

- Rubber belt conveyor (3 sets)
- Storage silo (3 sets)
- Stack yard (1 sets)
- Rotary Drum (2 sets)
- Cyclone filter (2 sets)
- Exhaust fan (2 sets)
- 50 kg bagging, palletizer and wrapping system (1 set)
- 1000 kg bagging system
- Instrument
- Electrical (Lighting, Earthing & Cabling)
- UCP/PLC control system
- VFD and switchgear

Capacity (Handling) : 120 T/hr
Client: PIDEC
Delivery date: 2013
Status: Completed
Location: Bandar Abbas - Iran

Product: Granule (spherical shape)
Storage: 3 X 350 ton = 1,050 ton silo and stack yard for 1,700 ton
Handling: Rubber belt conveyor

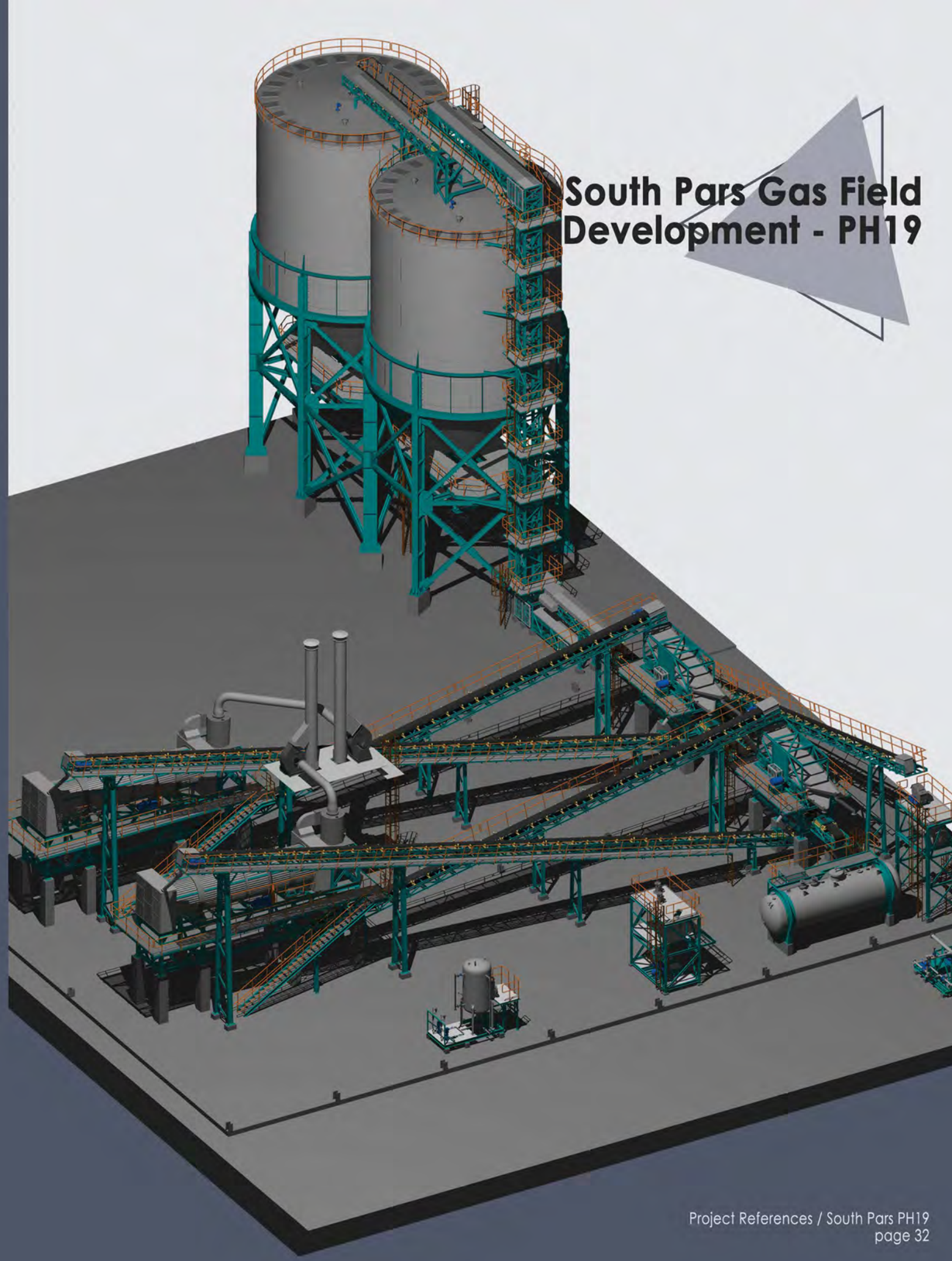
South Pars Gas Field Development - PH 19

Bulk Material Handling and Storage Unit

Capacity (Handling): 190 T/hr
Client: POGC/PPI
Delivery date: 2014
Status: Completed and in operation
Location: Tombak - Bushehr
Storage: 2 x 1100 tonnes
Handling: Rubber belt conveyor and bucket elevator

Equipment:

- Rubber belt conveyor (8 sets)
- Chain bucket elevator (1 set)
- Rotary Drum (2 sets)
- Vibration screener (2 sets)
- Crusher (1 set)
- Re-melter package (1 set)
- Storage silo (2 sets)
- Telescopic loading chute (2 sets)
- Cyclone filter (2 sets)
- Exhaust fan (2 sets)
- UCP/PLC control system & instrument
- VFD and VFD panel



South Pars Gas Field Development - PH 19

Bulk Material Handling and Storage Units

South Pars Gas Field Development - PH 17&18

Bulk Material Handling and Storage Unit

Client: Industrial Projects Management of Iran (IPMI)

Delivery date: 2015

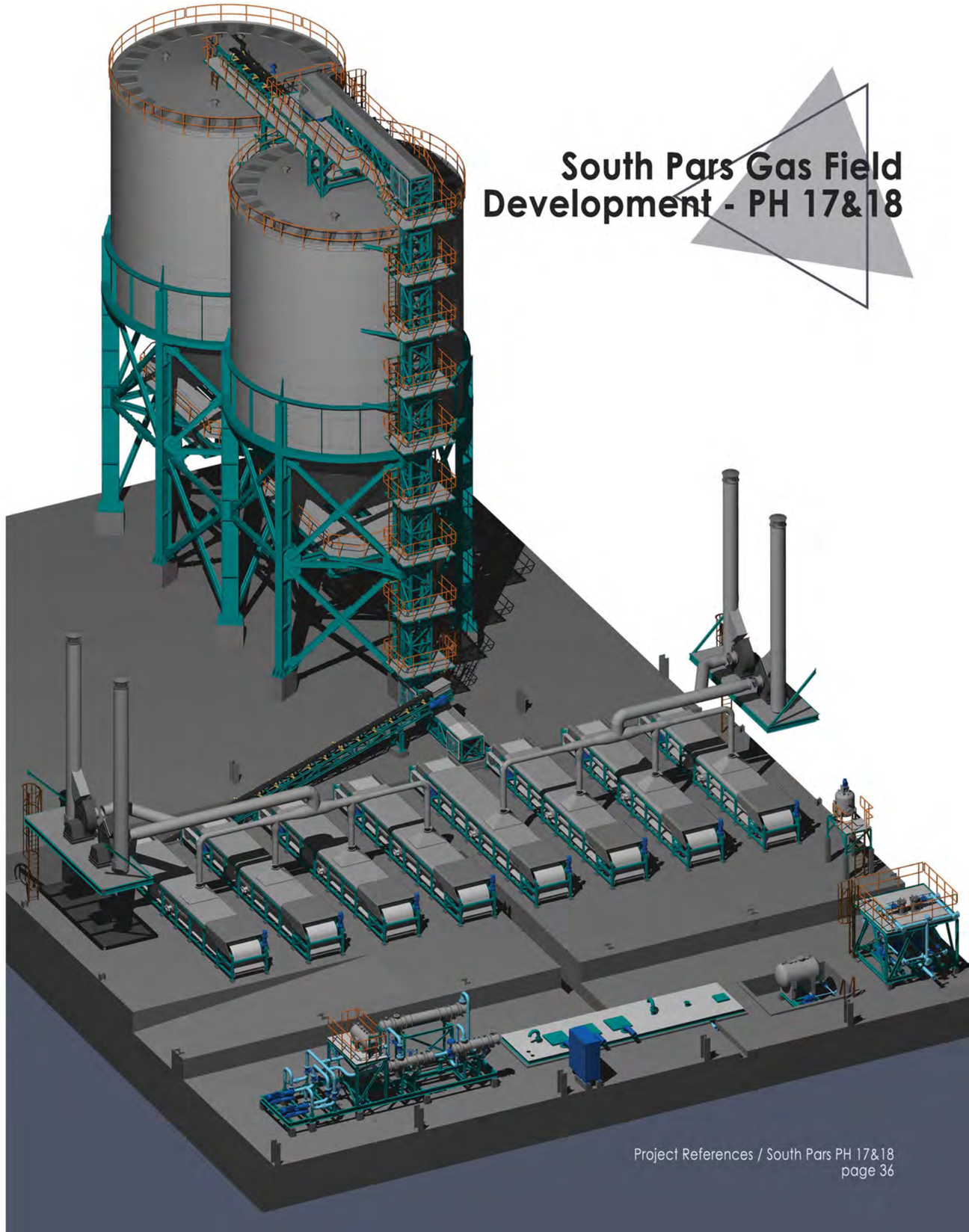
Capacity (Handling): 90 T/hr

Status: Completed and in operation
Location: Assaluyeh - Iran
Product: Pastillation (hemispherical shape)
Storage: 2 X 1,100 tonnes = 2,200 tonnes silo
Handling: Rubber belt conveyor and bucket elevator

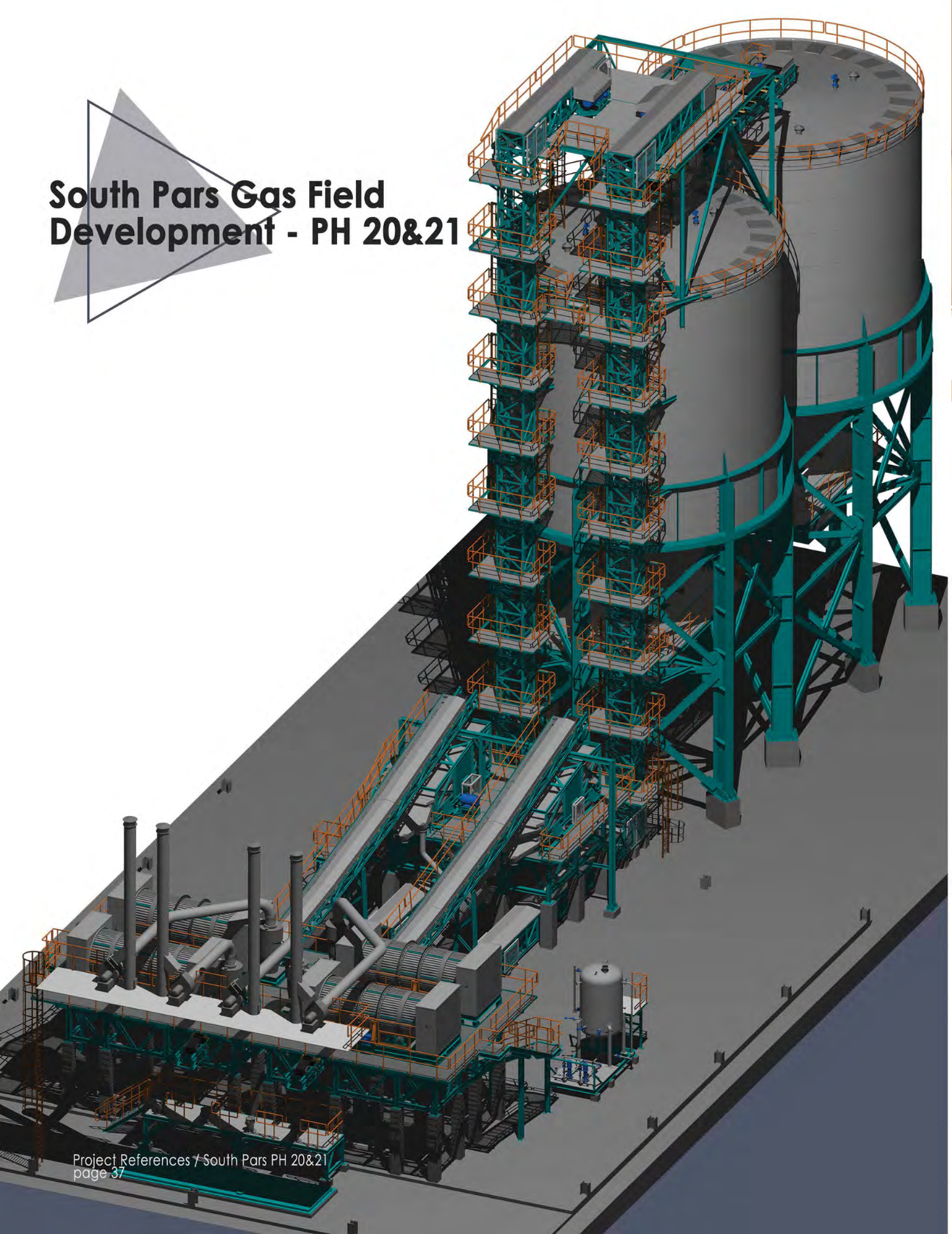
Equipment:

- Metallic Steel belt conveyor (cooler) (8 sets)
- Exhaust fan (4 sets)
- Rubber belt conveyor (2 sets)
- Chain bucket elevator (1 set)
- Storage silo (2 sets)
- Telescopic loading chute (2 sets)
- UCP/PLC control system
- Instrument
- VFD and LCS

South Pars Gas Field Development - PH 17&18



South Pars Gas Field Development - PH 20&21



South Pars Gas Field Development - PH 20&21

Bulk Material Handling and Storage Unit

Equipment:

- Rubber belt conveyor (3 sets)
- Chain bucket elevator (2 sets)
- Rotary Drum (4 sets)
- Vibration screener (2 sets)
- Storage silo (2 sets)
- Telescopic Loading chute (2 sets)
- Cyclone filter (4 sets)
- Exhaust fan (4 sets)
- UCP/PLC control system
- Instrument

Capacity (Handling) : 190 T/hr
Client: Oil Industries Engineering and Construction (OIEC)
Delivery date: 2017
Status: Completed and in operation
Location: Assaluyeh - Iran

Product: Granule (spherical shape)
Storage: 2 X 1,100 ton = 2,200 ton silo
Handling: Rubber belt conveyor and bucket elevator

South Pars Gas Field Development - PH 20&21

Bulk Material Handling and Storage Unit

Persian Gulf Star Refinery

Bulk Material Handling and Storage Unit

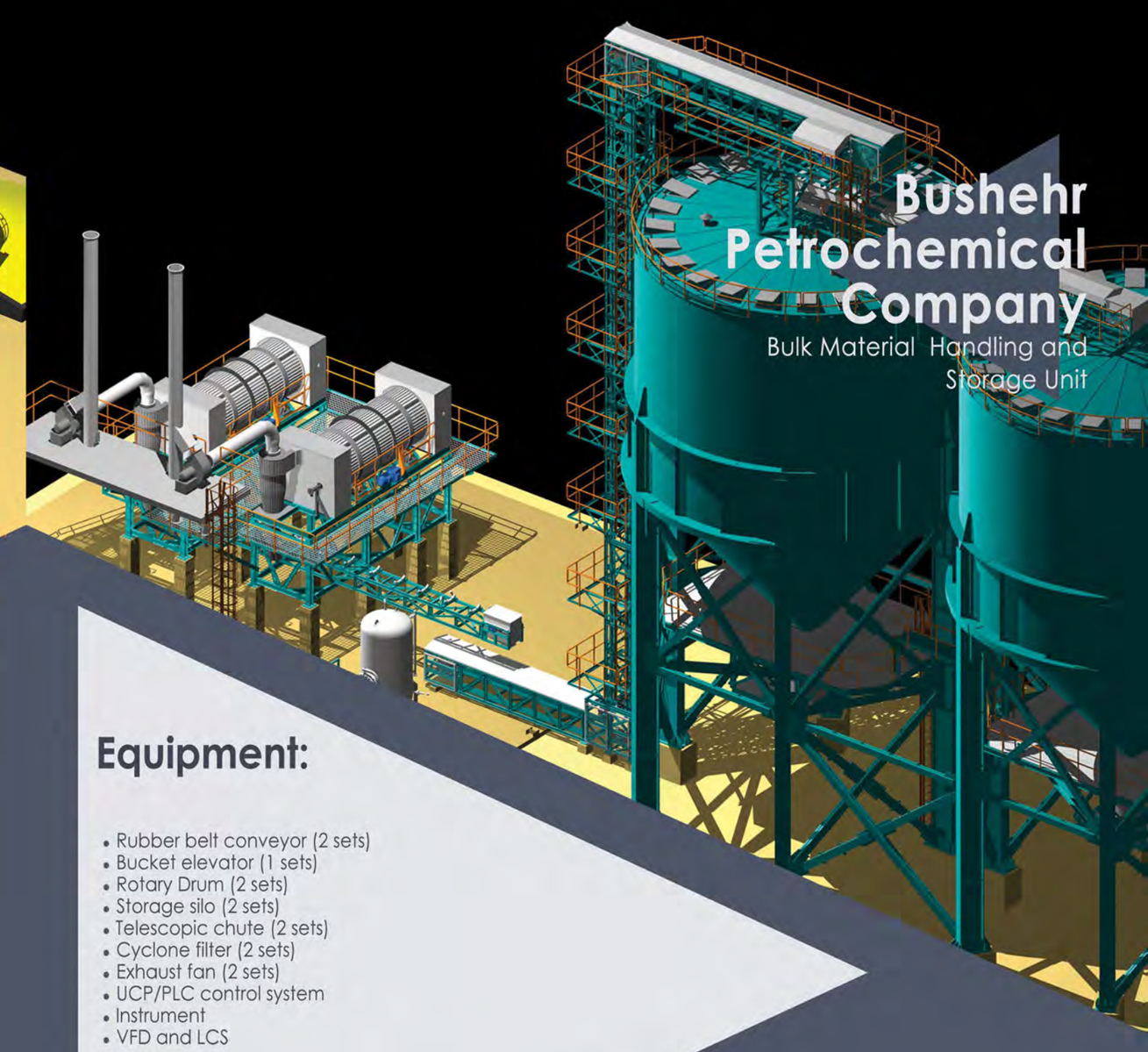
Equipment:

Rubber belt conveyor (1 Set)

Rotary Drum (2 Set)
Storage silo (2 Set)
Stack yard (1 Set)
Diverting Gate (2 Set)

Cyclone filter (2 Set)
Exhaust fan (2 Set)
UCP/PLC control system
Instrument
VFD and switchgear

Client: Nardis / Persian Gulf Star Company
Delivery date: 2020
Capacity (Handling): 90 tonnes per hour
Status: Completed
Location: Bandar Abbas - Iran
Product: Granule (spherical shape)
Storage: 2 X 128 ton = 256 ton silo
and stack yard for 5600 ton
Handling: Rubber belt conveyor



Bushehr Petrochemical Company

Bulk Material Handling and Storage Unit

Equipment:

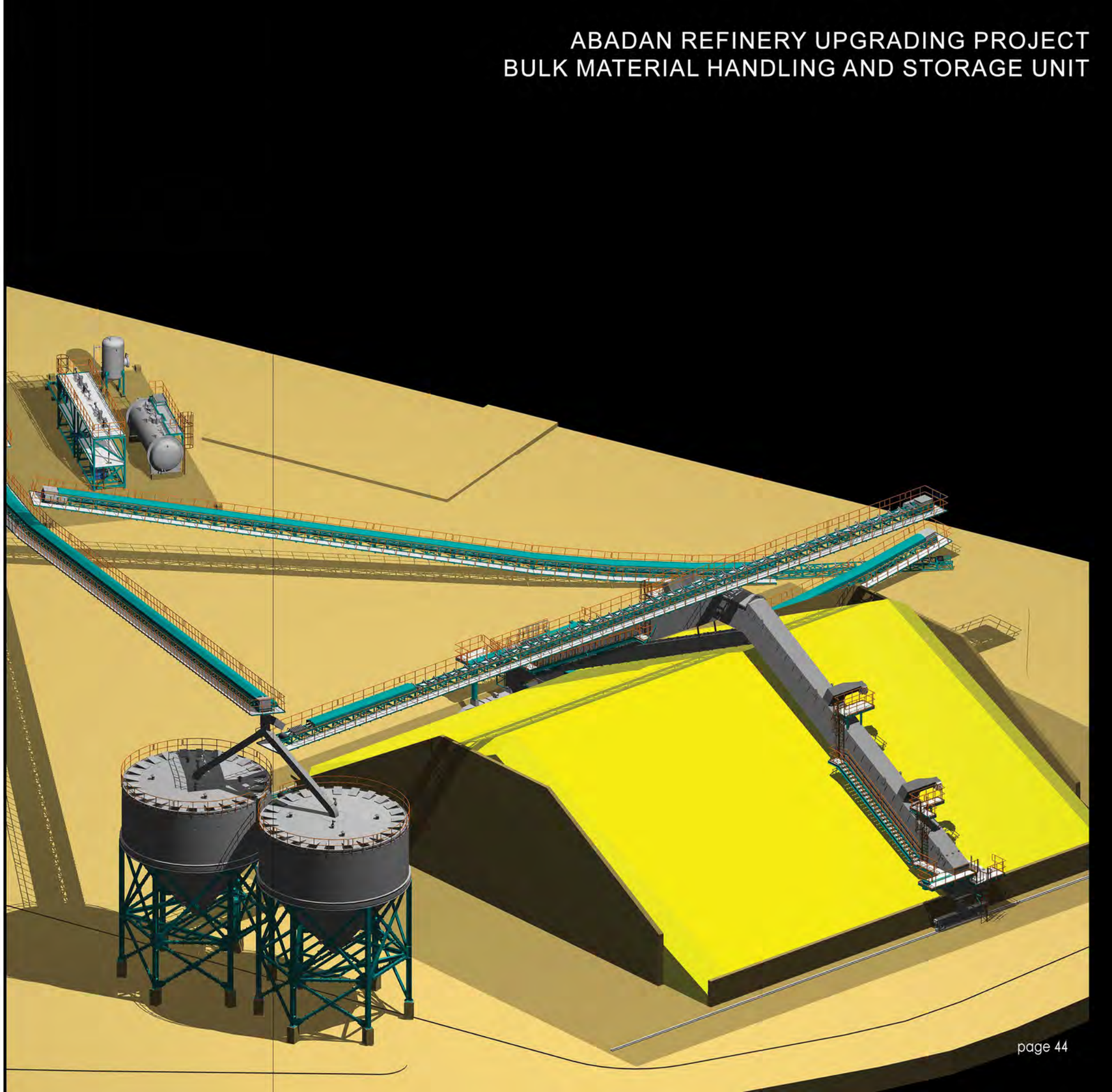
- Rubber belt conveyor (2 sets)
- Bucket elevator (1 sets)
- Rotary Drum (2 sets)
- Storage silo (2 sets)
- Telescopic chute (2 sets)
- Cyclone filter (2 sets)
- Exhaust fan (2 sets)
- UCP/PLC control system
- Instrument
- VFD and LCS

Capacity (Handling) : 190 T/hr
Client: BUPC-Bushehr Petrochemical Co
Delivery date: 2019
Status: Completed
Location: Assaluyeh - Iran

Product: Granule (spherical shape)
Storage: 2 X 800 TONNES = 1,600 tonnes silo
Handling: Rubber belt conveyor and bucket elevator

Abadan Refinery Upgrading Project
Bulk Material Handling and Storage Unit

Method:	Re-claimer & stack yard
Client:	NIOEC/SEI & ODCC
Delivery date:	2023
Status:	Under construction
Location:	Abadan - Iran
Bulk material:	Granular sulphur (spherical shape)
Storage:	Stack yard, 14,000 tonnes
	Silos, 2 X 460 tonnes = 920 tonnes
Handling capacity	330 T/hr
Equipment:	• Two arm portal reclaimer (1 sets)
	• Tripper car & Stacker (1 sets)
	• Rubber belt conveyor (4 sets)
	• Rotary drum (4 sets)
	• Silo (2 sets)
	• Automatic truck loading (2 sets)
	• Exhaust fan (4 sets)
	• Cyclone filter (4 sets)
	• Water treatment, clarifier and Screw conveyor
	• Water transfer pumps (2 sets)
	• UCP/PLC and control system
	• Instrument
	• VFD and switchgear
	• Electrical (Lighting, Earthing and Cabling)
	• Firefighting and F&G system
	• Shelter and steel structure (~600 Ton)
	• Weighing system (100 Ton)
	• Dust suppression system



South Pars Gas Field Development - PH 12

Bulk Material Handling and Storage Units