



Engineering  
made by ThyssenKrupp Fördertechnik

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**Kombinierte Foerderanlagen**

**Combined Materials Handling Systems**

**Installations combinées de manutention**

Translation	Übersetzung	Traduction	Traducción
Purchaser	Besteller	Client	Cliente
Location	Aufstellungsort	Lieu d'installation	Lugar de instalación
Year of construction	Baujahr	Année de construction	Año de construcción
Type of plant	Bauart	Type de construction	Tipo de construcción
Material handled	Fördergut	Produits à manutentionne	Material a transportar
Handling capacity t/h	Leistung t/h	Débit t/h	Capacidad t/h
Description and composition of the plant	Beschreibung und Zusammenbau der Anlage	Description et	

Referenzen der Unternehmen Demag, Polysius, O & K, Krupp India, PWH, PHB, Krupp Industrietechnik sowie der heutigen ThyssenKrupp Fördertechnik und ihrer Auslandsgesellschaften.

References of the companies Demag, Polysius, O & K, Krupp India, PWH, PHB, Krupp Industrietechnik as well as the ThyssenKrupp Fördertechnik of today and its foreign subsidiaries.

Um die Referenzliste übersichtlich zu halten, beginnt sie mit den Lieferungen aus dem Baujahr 1970. Von 1950 bis 1970 waren bereits 30 Anlagen verschiedener Bauarten geliefert worden.

In order to keep the reference list clear, it is starting with equipment , the year of construction of which was 1970. From 1950 to 1970 more than 30 conveying systems of different designs had been built.

Translation	Übersetzung	Traduction	Traducción
<b>Material handled:</b>	<b>Fördergut:</b>	<b>Produit à manutentionner:</b>	<b>Material a transportar:</b>
Alumina	Tonerde	Alumine	Alúmina
Amonium sulphate	Amoniumsulfat	Sulfate d'ammonium	Sulfato de amonio
Apatite	Apatit	Apatite	Apatita
Bauxite	Bauxit	Bauxite	Bauxita
Cement	Zement	Ciment	Cemento
Clinker	Klinker	Clinker	Clinker
Coal	Kohle	Charbon	Carbón
Coke	Koks	Coke	Coque
Coper concentrate	Kupferkonzentrat	Cuivre concentré	Concentrado de cobre
Crome ore	Chromerz	Minerai de chrome	Mineral de cromo
Fertilizer	Düngemittel	Engrais	Fertilizante
Fertilizer granulate	Düngemittel Granulat	Engrais granulé	Fertilizante granulados
Gold concentrate	Goldkonzentrat	Or concentré	Concentrado de oro
Grain	Getreide	Céréales	Cereales
Heavy soda	Schwer-Soda	Soude lourde	Sosa pesada
Iron ore	Eisenerz	Minerai de fer	Mineral de hierro
Kaolin	Kaolin	Kaolin	Caolín
Limestone	Kalkstein	Calcaire	Piedra caliza
Pellets	Pellets	Boulettes	Pellets
Petroleum coke	Petrolkoks	Coke de pétrole	Coque de petróleo
Phosphate	Phosphat	Phosphate	Fosfato
Potash	Kalisalz	Potasse	Sales potásicas
Pyrite	Pyrit	Pyrite	Pirita
Rice	Reis	Riz	Arroz
Rock salt	Steinsalz	Sel gemme	Sal gema
Rock phosphate	Steinphosphat	Phosphate pierreux	Piedra de fosfato
Salt	Salz	Sel	Sal
Sand (calcareous)	Sand (kalkhaltig)	Sable (calcaire)	Arena (calcáreo)
Sintermagnesite	Sintermagnesit	Magnésite frittée	Magnesita sinterizada
Soda ash	Soda-Asche	Cendre de soude	Ceniza de sosa
Stone coal	Steinkohle	Charbon	Carbón de piedra
Sugar	Zucker	Sucre	Azúcar
Sulphur	Schwefel	Sulfure	Sulfuro
Urea	Harnstoff	Urée	Urea
KCL	KCL	KCL	KCL
DAP	DAP	DAP	DAP
MAP	MAP	MAP	MAP

## Combined Materials Handling Systems

No.	Purchaser	Location	Year of Const.	Type of the Plant	Materials handled	Handling Capacity	Description and Composition of the Plant
31	AB Förenade Superfosfat Fabriker Landskrona/Sweden	Landskrona Sweden	1970	Conveying facilities for raw materials in a fertilizer plant	Phosphate, potash	1300 t/h	The raw materials, unloaded from ships, are conveyed from the collecting hoppers into the silos and to the storage places or to the phosphate grinding mill and brought, on demand, to the NPK-factory. Travelling bins, vibrating feeders, bucket elevators; 2 semi-portalscraper reclaimers, cap. 120 t/h each; samplers, dust collection, 29 conveyors of a total length of 2000 m.
32	AB Förenade Superfosfat Fabriker Landskrona/Sweden	Landskrona Sweden	1970	Conveying facilities for finished products in a fertilizer plant	Granulated NPK and PK	350 t/h	The finished products of the PK and NPK factories are stored, reclaimed as needed, screened, bagged and loaded into trucks. 2 semi-portalscrapers, cap. 350 t/h each; vibrating feeders and screens; 35 conveyors, total length: 2440 m; dust collection.
33	Société Thionvilloise de Ciments Thionville/Moselle France	Usine d'Ebange à Ebange Moselle France	1970	Conveying and blending plant	Granulated blast furnace slag, clinker, limestone	0.9-1.3 t/m <sup>3</sup>  300 m <sup>3</sup> /h 150 m <sup>3</sup> /h	The raw materials arriving by wagons are conveyed from the discharging hopper to the grinding and drying bins in the cement works. The fine slag is blended in an intermediate annular stockyard. Annular stockyard of 96 m dia. with loading bridge, cap. 300 cubic m/h and bridge reclaimer, cap. 150 cubic m/h; 10 belt conveyors of a total length of 680 m.
34	Saarbergwerke AG Saarbrücken Germany	Kokerei Fürstenhausen Germany	1970 1971	Coke screening and conveying plant	Egg coke, metallurgical coke, sinter coke and pearl coke	250 t/h	The quenched coke is reclaimed at the coke ramp, is pre- and re-classified in 2 screening systems of 125 t/h capacity each and loaded on railway cars. 10 crushers. 33 vibrating screens. 20 vibrating feeders. 2 drying plants. 39 conveyors, total length: 1300 m, partly for hot goods. Loading on 3 tracks 150 t/h each.
35	Veba Kraftwerke Ruhr AG vormals Hibernia AG Gelsenkirchen Germany	Scholen Germany	1971	Power station coaling plant	Coal	900 t/h	The coal arriving in wagons is stored in slot hoppers, reclaimed by discharge carriages and carried to the boiler station either directly or over a storage area. 2 discharge carriages. 1 stacker. 31 conveyors, total length: 2260 m.
36	SIDMAR Sidérurgie Maritime S.A. Brussels, Belgium	approx. 15 km from Gent, Belgium	1971	Conveying and storing plant	Coke, sinter, coal	800 t/h 300 t/h - 600 t/h 1500 t/h	Distribution of coal, coke, sinter and flux within the smelting works. Coke and sinter are stored in intermediate stockpiles and reclaimed if required. 2 bucket wheel reclaimers (combined units to load and reclaim). 22 conveyors, total length 3700 m.
37	Mediterranean Fertilizer Industries A/S (via Hewitt-Robins Europe Amsterdam)	Mersin Turkey	1971	Conveying and loading facilities in a fertilizer plant	Phosphate, pyrite, CAN, DAP	2000 t/h	Raw material arriving in trains is stored and brought to the factory. The finished products are stored in piles and conveyed to bagging or to wagon loading. 2 twin-rail scrapers, cap. 370 t/h and 120 t/h. 1 overhead chain conveyor. Bagging station. 1 frontal wagon tippler. 49 conveyors, total length: 2030 m.
38	ARBED Division d'Esch-Beval Esch-sur-Alzette Luxembourg	Hochofenwerk Belval Luxembourg	1971 1972	Conveying and preparing facilities	Iron ore, fuels sinter	1000 t/h	Iron ore, fuels and flux material arriving in trains are conveyed after preparation either immediately to the sinter plant or after having passed the blending stockpile. The sinter is screened and conveyed to the charging bins. - 2 stackers, cap. 2200 t/h each. 1 reclaimer, cap. 2000 t/h. 113 conveyors, total length: 8000 m (in 2 stages). Sampler.
39	August Thyssen-Hütte Duisburg-Hamborn	Schwelgern, Germany	1972	Stockyard loading and reclaiming	Iron ore, fuels sinter	2300 t/h	Coarse iron ore is reclaimed by 2 bucket wheel reclaimers. Fine ore is conveyed to blending yards by 3 parallelly arranged conveyors that are alternately connected to one of two loadings bridges. - 2 bucket wheel reclaimers, cap. 1800 t/h each. 2 loading bridges, 2300 t/h each. 24 conveyors, total length: 2060 m
40	ARBED Division des Mines Luxembourgeoises Esch-sur-Alzette	Heinzenberg Luxembourg	1972	Conveying and storing facilities	Iron ore	1.6 t/m <sup>3</sup> 800 t/h	The ore, brought up in trucks and mine tramway, is pre-crushed, provisionally stored and distributed to the loading stations for re-transmission to diverse blast-furnace plants. - 1 stacker cap. 800 t/h. 1 bucket-wheel reclaimer, cap. 800 t/h. 12 conveyors, total length: 1990 m. Sampler. 1 bicable ropeway 7 km long, cap. 500 t/h.

## Combined Materials Handling Systems

No.	Purchaser	Location	Year of Const.	Type of the Plant	Materials handled	Handling Capacity	Description and Composition of the Plant
41	Puerto Autonomo de Huelva (via Macosa Valencia/Spain)	Huelva Spain	1972	Handling plant	Pyrite, iron ore, manganese ore	3000 t/h	The material arriving in trains and trucks is stored in piles, reclaimed on demand and shipped. - 1 wagon tipper with spotting device. 2 stackers, cap. 1000 t/h and 250 t/h. 2 bucket wheel reclaimers and 2 shiploaders, cap. 1500 t/h each. 20 conveyors, total length: 4150 m.
42	Portlandzementwerk Dotternhausen Rudolf Rohrbach KG Balingen	Dotternhausen Germany	1972	Conveying and storing facilities	Limestone, clay	1.4 - 1.5 t/m <sup>3</sup> 150 t/h	Limestone and clay arriving by ropeway and trucks is stored in sheds and conveyed, as needed, to the cement-fabrication. - 1 bridge scraper, cap. 150 t/h, for limestone. 1 portal scraper, cap. 150 t/h, for clay. 13 conveyors, total length: 700 m.
43	APO - Acières de Paris et d'Outreau Paris/France	Boulogne-sur-Mer France	1972	Preparation and blending plant	Manganese ore and flux material	2.1 t/m <sup>3</sup> , 500/380 t/h	The material coming from the ship or the stockyard is classified in 2 screening lines and - in part after having passed a blending bed - conveyed to the blastfurnace charging. - 12 screens for ore with a total screening surface of 52 m <sup>2</sup> . 1 round blending yard 86 m diam. for 2 heaps 12500 m <sup>3</sup> each. 25 conveyors, total length: 890 m.
44	Terminais Salineiros do Rio Grande do Norte S.A. (Termisa) Rio de Janeiro/Brazil	near Areia Branca and Macau Brazil	1973	Handling plant	Salt	1.23 t/m <sup>3</sup> , 1500 t/h	Salt arriving in barges is unloaded on an artificial island off the shore by 2 discharge bridges and conveyed either directly to the loader of seagoing vessels or intermediately to a stockyard. 2 grab-equipped ship unloading units, cap. 300 t/h each. 1 shiploader, cap. 1500 t/h and conveyors, total length: 590 m.
45	S.A. des Ciments Portland de Lorraine Héming/Moselle	Usine de Héming at Rhein-Marne-Kanal France	1973	Conveyance and storage plant	Limestone	0-30mm, 1.3-1.4 t/m <sup>3</sup> 500/300 t/h	Limestone arriving on belt conveyors from the quarries is stored in a shed, blended upon reclaiming and conveyed to the crushers and dryers. - 1 stacker, cap. 500 t/h, 1 bridge scraper, cap. 300 t/h. 5 belt conveyors, total length: 690 m.
46	Compania de Mineracao de Ferro e Carvao Rio de Janeiro/Brazil	Mina Doao Pereira Brazil	1973	Conveyance and storage plant	Iron ore	0-150 mm, 2000 t/h, 1500 t/h, 800 t/h	Ore arriving in lorries is stored in a blending stockyard, reclaimed by a bucket wheel unit, crushed and screened, stored in a fine ore yard and finally carried to the railway dispatch. - 1 stacker, cap. 2000 t/h. 1 bridge reclaimer, cap. 1500 t/h. 1 crushing and screening station. 1 loading bridge, cap. 800 t/h. 14 conveyors, total length: 2750 m.
47	Secretaria da Industria e Comércio de Estado de Bahia/Brazil	Hafen Aratu Brazil	1973	Port handling facilities	Ore, coke and other bulk materials	0.5 - 3.9 t/m <sup>3</sup> 1800 m <sup>3</sup> /h or 2400 t/h	Various bulk materials arriving by ship or train are stored, reclaimed on demand and loaded into seagoing vessels. - 1 ship unloading unit, cap. 940 t/h. 1 stacker. Travelling feeding hoppers. Vibrators. 1 shiploader, cap. 2400 t/h. 7 conveyors, total length: 1560 m.
48	ISCOR Iron & Steel Corp. Vanderbijl Park	Vanderbijl Park South Africa	1974	Conveying and preparation	Iron ore	2.6 t/m <sup>3</sup> 550 t/h	The material arriving in railway wagons is discharged into two tippers and passes through a screening station, for fine ore separation, stacked on two storage areas, reclaimed and conveyed to the blast furnace bunkers. 2 wagon tippers, 1 screening plant, 2 stackers 550 t/h. 1 stacker 530 t/h. 2 double bucket wheel reclaimers 550 t/h. 1 fines screening plant. 2 bunker trippers. Belt conveyors.
49	Cementa AB Malmö/Sweden	Limhamn Sweden	1974	Combined plants for Conveying and Shiploading	Clinker, cement	1.3 t/m <sup>3</sup> 1000 t/h	The clinker is reclaimed by a vibrating feeder and discharged onto the clinker belt which conveys it to the collecting belt. Cement is also conveyed to the collecting belt after having been reclaimed from the silos by means of screw conveyors. Either material then passes over the jetty conveyor to the shiploader. Belt conveyor plant. Dust collection. 1 100 t/h shiploader.
50	Petrofertil Salvador (Bahia) Brazil	Camacari Brazil	1975	Conveying and loading facilities in a fertilizer plant	Bulk and bagged urea	0.75 t/m <sup>3</sup> 300 t/h or 2400 bags/h of 50 kgs	The coated urea stacked in the storage buildings is reclaimed in accordance with requirements. Bulk material is then fed either direct to wagons or to a bagging plant from where the bags are loaded to wagons or lorries. 1 coating drum cap. 40 t/h, 1300 t/h scraper, 4 bagging machines for 600 bags/h each, belt conveyors totalling 910 m in length.

## Combined Materials Handling Systems

No.	Purchaser	Location	Year of Const.	Type of the Plant	Materials handled	Handling Capacity	Description and Composition of the Plant
51	Petrofertil Salvador (Bahia) Brazil	Aratu Brazil	1975	Fertilizer handling facilities	Urea	0.75 t/m <sup>3</sup> 750 t/h	The urea arrives in railway wagons and is stored in enclosed buildings, from where it is reclaimed when required for loading into seagoing vessels in the Port of Aratu (see ref. 47) 1 scraper, cap. 750 t/h, 1 tripper, 4 vibrating feeders, belt conveyors totalling 880 m in length.
52	Shahpur Chemical Comp. Teheran (via Stone & Webster, London)	Bandar Shahpur Iran	1975	Conveying and loading facilities in a fertilizer plant	Urea  DAP	0.75 t/m <sup>3</sup> Trucks 6400 bags/h Wagon 2700 bags/h 0.95 t/m <sup>3</sup> Trucks 2400 bags/h Wagon 1800 bags/h	The material stacked in buildings is reclaimed, screened and bagged according to requirements for loading into lorries or wagons. The equipments comprise 2400 t/h full portal scrapers for urea, 1 135 t/h full portal scraper for DAP. Screening plant. 11 bagging machines.
53	V/O Techmashimport Moskau	Odessa Ukraine	1975	Urea-Complete handling plant	Urea	0.75 t/m <sup>3</sup> 1000 t/h bulk material or 8000 bags/H à 50 kg = 400 t/h	Urea arrives in rail wagons, is unloaded and stacked in two storage buildings. Material is then reclaimed and screened before passing either direct to ship as bulk or to a bagging plant first. Shiploaders for seagoing vessels incorporate bulk, bagged and combination types. 2 full portal scrapers 500 t/h each, 1 circular stockpile and scraper, screening plant, re-prilling plant, bagging system, bag manufacturing plant. Ship loading and wagon unloading plant.
54	V/O Techmashimport Moskau	Ventspils Latvia	1976	Conveying and loading	Potash	1.3 t/m <sup>3</sup> 1500 t/h	The material arriving in wagons is stockpiled and then reclaimed, when required, for loading into seagoing vessels. 2 full portal scrapers 1500 t/h. 2 shiploaders 1500 t/h.
55	The Hashemite Kingdom of Jordan Amman	Aqaba Jordan HKJ	1976	Phosphate handling plant	Phosphate	1.43 t/m <sup>3</sup> per loader 2100 t/h	The material arriving in wagons or lorries is stockpiled, then reclaimed, when required, for loading into seagoing vessels. - 2 tripper systems for stockpiling, 2 full portal scrapers 2100 t/h. 1 shiploader 2100 t/h. Belt conveyor system totalling 2400 m in length.
56	Zementwerk Canakkale	Canakkale Turkey TR	1977	Combined plants for Conveying	Limestone, Clay, Cement, Clinker	1.4 t/m <sup>3</sup> 500 t/h or 2000 bags/h	Limestone and clay are stacked in a building to supply a cement work in accordance with requirements. Cement and clinker are conveyed either to a shiploader (bags and bulk material) or a barge loader (bags only). Stacker 500 t/h. Full portal scraper 500 t/h. Shiploader 500 t/h or 2000 bags/h. Barge loader 2000 bags/h = 100 t/h. Including a belt conveyor system.
57	Iran Fertilizer Teheran (via Davy Powergas)	Shiraz Iran IR	1978	Fertilizer Plant	Urea  Amonium-nitrate	0.7 t/m <sup>3</sup> 350 t/h = 8400 bags/h 1.0 t/m <sup>3</sup> 180 t/h = 4800 bags/h 45 t/h = 2400 bags/h	The materials arriving from the process plants are stacked prior to passing to the screening plant and bagging facilities for loading into lorries. Explosive grade AN is stored in bags within a fire protected storage building 3 full portal scrapers. 1 screening plant. 1 bagging and loading plant. 1 palletizing and depalletizing station.
58	Jugotechna Beograd/Yugoslavia for RTB BOR RO HI ZORKA	Subotica Yugoslavia	1979	Conveying and Loading facilities	Phosphate, Potash	0.7 t/m <sup>3</sup> 250 t/h	The raw material arriving in railway wagons is unloaded and stored temporarily in buildings. After having run through all processing stages the final fertilizer products are conveyed, after having passed through crushing and screening stations, to the bagging plant, or directly, as bulk to the loading plant for either rail or road transport. - 2 full-portal scraper reclaimers 250 t/h, crushing and screening plant, belt conveyors, bagging and loading facilities for bulk and bagged material.
59	Stahlwerk Kursk	Kursk GUS	1979	Conveying and storing facilities	Pellets	1100 t/h	Oxide pellets from the pelletizer plant are stored temporarily in an outdoor store and are conveyed from there to the reduction furnace. After the reduction process the metallized pellets are either conveyed through the intermediate bins of the wagon loading station or to the storage bins of the steelworks. - 62 belt conveyors 20 to 1100 t/h.

## Combined Materials Handling Systems

No.	Purchaser	Location	Year of Const.	Type of the Plant	Materials handled	Handling Capacity	Description and Composition of the Plant
60	INA Commerce Zagreb/Yugoslavia for INA Petrokemija	Kutina Yugoslavia	1980	Conveying and Loading facilities	Urea	345 t/h	The material is temporarily stored in storage building, is reclaimed then by full-portal and semi-portal scraper reclaimers and conveyed as bulk or after run through bagging lines to the loading stations. - 1 full-portal scraper 345 t/h Urea, 2 semi-portal scrapers 180 t/h NPK and MAP, 12 bagging lines for each 1200 bags à 50 kg/h, thereof 4 fully-automated lines for gusseted bags as per the form-and-fill method, 2 palletless packaging lines, 2 automatic lorry loading lines, 5 manual loading lines for lorries and 8 wagon loading lines.
61	Mecan Arbed Völklingen	Arbed Saarstahl Völklingen Germany	1980	Conveying and dosing facilities	Additives		The material arriving in railway wagons is conveyed through intermediate and daybins to the processing plant. - Wagon unloading station, belt conveyor system to the intermediate and daybins, 1 limestone screen, 35 vibratory troughs, 7 belt conveyors with a total length of 440 m, 3 dust plants.
62	Zementwerk Gebr. Wiesböck Rohrdorf	Rohrdorf Germany D	1981	Raw materials conveying and storing facilities	Limestone, Marl, Clay, Coal	1.5/0.8 t/m <sup>3</sup> 200/30 t/h	The raw material arriving in railway wagons and lorries is stored in several storage buildings and then conveyed, following homogeneization, dosed to the milling bunker. - 1 portal reclaiming scraper 200 t/h with dosage, 1 bridge-type reclaimer scraper 200 t/h with dosage, 1 bridge-type reclaiming scraper 30 t/h, 11 belt conveyors of a total length of approx. 610 m.
63	Heizkraftwerk Erlangen	Erlangen Germany D	1981	Power station coaling plant	Pit coal	0.85 t/m <sup>3</sup> 255 t/h	Coal arriving in railway wagons and lorries is unloaded into slotted bin, reclaimed by rotary plow feeder and conveyed by belt conveyor, vibration feeder, belt pocket conveyor and flight conveyor directly into the coating bunker, or through the combined scraper machine to the segment-shaped store of 16,000 t/h holding volume. Another conveying route is available as emergency coaling line. Reclaiming from the store is achieved by a rotary scraper. - 1 combined scraper machine for stacking and reclaiming, 1 rotary plow feeder 255 t/h, 4 vibration feeders, 1 belt pocket conveyor, 1 flight conveyor, 6 belt conveyors with 220 m total conveying length.
64	SAMAD Riad/Saudi Arabia	Al Jubail Saudi Arabia SA	1981	Urea handling plant	Urea	700 t/h	Urea coming from the processing plant is temporarily stored and then transported on lorries to a handling plant 10 km away. There the product is packed and loaded by shiploader either as bulk or as bagged material in ocean-going ships. - 1 full-portal scraper 700 t/h, 1 belt type bucket elevator, 4 dust plants, 1 screening plant, 1 vibration feeder, 2 shiploaders each for 350 t/h bulk or 2400 bags/h, 50 belt conveyors with total conveying length 3240 m.
65	The Hashemite Kingdom of Jordan Amman	Aqaba Jordan	1982	Handling and conveying facilities	Sulphur, Phosphate, Gypsum, Fertilizer	2000 t/h	The total plant subdivided in 4 transport lines: 1) raw sulphur is unloaded by continuous ship-unloader from ocean-going ships, is temporarily stored and conveyed, as required, to the sulphuric acid production. 2) The raw phosphate arriving in lorries is temporarily stored and conveyed, as required to the phosphoric acid production. 3) The gypsum produced with the production of phosphoric acid is conveyed to a disposal yard. 4) The fertilizers are temporarily stored in storage buildings and loaded into ocean-going ships by shiploader. - 1 continuous ship unloader 550 t/h, 2 shiploaders each 2000 t/h, 1 full-portal scraper reclaimer 1500 t/h, 2 hydraulic lorry platform dumpers each 300 t/h, 2 vibration feeders, 3 trippers, 37 belt conveyors with a total conveying length of 8355 m, dust plants, storage buildings.

## Combined Materials Handling Systems

No.	Purchaser	Location	Year of Const.	Type of the Plant	Materials handled	Handling Capacity	Description and Composition of the Plant
66	KNPC Kuwait National Petroleum Company Kuwait	Mina Al-Ahmadi Refinery Kuwait	1983	Sulphur solidification and shipping plant	Sulphur	400 t/h	Liquid sulphur coming from the refinery is solidified on cooling belt conveyors and temporarily stored in a circular storage building. From there the material is conveyed to the lorry loading station or to the shiploader. - 4 liquid sulphur tanks each 2000 m <sup>3</sup> , pump station, 3 cooling belt conveyors, 1 stacker 100 t/h, 1 portal reclaiming scraper 400 t/h, 1 circular storage building, dust plant, fire fighting facilities, lorry - loading station, 1 shiploader 400 t/h, 8 belt conveyors with a total conveying length of 1995 m.
67	The Hashemite Kingdom of Jordan Amman	Aqaba Jordan	1983	Potash-Handling plant	Potash	1.06-1.15 t/m <sup>3</sup> 2000 t/h	The material arriving in lorries is temporarily stored in 2 buildings and loaded by shiploader on ocean-going ships. - Lorry unloading station, sampling plant, intermediate bin, 2 full-portal reclaiming scrapers each 2000 t/h, 3 stackers each 500 t/h, 3 trippers each 500 t/h, 2 weighbridges, 2 shiploaders each 2000 t/h, 18 belt conveyors with 2951 m total conveying length, dust plants.
68	ADNOC Abu Dhabi National Oil Co., Fertil Abu Dhabi	Ruwais Abu Dhabi VAE	1983	Handling plant for Fertilizer and liquid ammonia	Fertilizer, Ammonia	400 t/h	The fertilizer granulate is conveyed from the stores or resp. the bagging station through 2 belt conveyors to the two combined shiploaders and loaded in ocean-going ships. Ammonia is coming through insulated pipelines to the tanker filling appliance by which it is transferred to the tanker. - 2 shiploaders for bulk each 400 t/h or bagged material each 2000 bags/h, 2 belt conveyors of total conveying length of 1600 m, 1 tanker filling appliance for 1000 t/h of liquid ammonia.
69	Dillinger Hüttenwerke Dillingen	Dillingen Germany D	1983	Fine Ores Transport and Blending Plant	Fine ore	3200 t/h	Coming from the already existing rail and road unloading stations fine ores and additives are stacked on piles by a rotary yard stacker. The material is then reclaimed by a drum reclaimer, while it is being homogenized, and then conveyed to the fine ores bin. The transfer platform allows for shifting the drum reclaimer from the evacuated to the filled storage pile. - 1 stacker 3200 t/h, 1 drum-type reclaimer 1200 t/h, 1 transfer platform, 8 belt conveyors of a total conveying length of 2111 m.
70	ZKS Zentralkokerei Saar Dillingen	Dillingen Germany	1983	Handling plant for coke ovens coaling	Coal	0.7 t/m <sup>3</sup> 1200 t/h	From the existing rail and road unloading stations the coal is transported to the blending and grades store. The coal directly conveyed into the blending store or the admixed coal from the grades store is then homogenized and transported through the coal preparation plant to the SCP-machines (stamping/charging/pushing). - 1 Stackers 1200 t/h, 1 portal reclaiming scraper 800 t/h, 1 bridge-type scraper reclaimer 800 t/h, 2 SCP-machines, 2 sampling plants, 2 rotary plow feeders, 20 belt conveyors of a total conveying of 2785 m.
71	V/O Techmashimport Moscow	Angarsk GUS	1984	Bagging and loading facilities	Carbamide	0.75 t/m <sup>3</sup> 41 t/h = 63 bags/h	From a bagging bunker the bulk is conveyed over a batchweigher and is then filled into the big-bags coming from the printer. After having been closed the bags are transported over a roller conveyor and by an overhead travelling crane into lorries or wagons. - 1 batchweigher, 1 filling plant 63 containers/h, 1 closing plant, 1 bag printer, 1 belt conveyor 10 t/h, 1 bucket elevator, 1 roller conveyor, 1 overhead travelling crane 5 t, 1 dust plant.
72	Kobe Steel Tokyo/Japan	Bintulu Malaysia	1984	Urea handling plant	Urea	0.7 t/m <sup>3</sup> 440 t/h or 2400 bags/h	Fertilizer reclaimed in the storage building is screened and is then conveyed either through the bagging plant or directly as bulk to the shiploader. - 1 full portal scraper 400 t/h, 2 vibration feeders each 225 t/h, 2 vibratory screens each 225 t/h, 2 lump breakers each 22.5 t/h, 2 vibratory feeder pipes each 31.5 t/h, 2 dust plants, 1 batch weigher 450 t/h, 1 shiploader 400 t/h or 2400 bags/h each 50 kg.

## Combined Materials Handling Systems

No.	Purchaser	Location	Year of Const.	Type of the Plant	Materials handled	Handling Capacity	Description and Composition of the Plant
73	NCC National Cement Company Cairo/Egypt	EI Tabbin Egypt	1985	Conveying, storing and homogenizing facilities	Limestone	1.5 t/m <sup>3</sup> 2500 t/h	The limestone coming from the quarry is transported by a belt conveyor system and 2 rotary stackers to 4 blending stores of a holding volume of 230,000 t. 4 bridge reclaiming scrapers reclaim the material, which is then transported on belt conveyors to the storage bin. Emergency reclaiming by front loaders is also possible. - 2 stackers each 2500 t/h, 4 bridge scrapers each 750 t/h, 15 belt conveyors of a total conveying length of approx. 2300 m.
74	Chittagong Urea Fertilizer Ltd. Bangladesh	Chittagong Bangladesh	1986	Conveying and loading facilities in a fertilizer plant	Urea	0.75 t/m <sup>3</sup> 220 t/h	Urea reclaimed from the prilling tower is coated and transported into the storage building. From there the product is reclaimed by portal reclaiming scraper and transported as bulk to ships or to the 8 bagging lines for being bagged. The bags are transported to a filled-bag store or are transported to a shiploader and loaded by this into ships. - 1 prilltower reclaimer, 1 powdering drum, 1 portal scraper 200 t/h, 8 bagging lines each 600 bags/h, 81 belt conveyors with a total length of 4700 m, 2 screens, 1 crusher, 16 roller conveyors, 14 curved belt conveyors, 3 lorry loading facilities, 2 extruders, 2 bag fabrication machines, dust plant.
75	Transimpex Foreign Trade Organisation Sofia	Varna Bulgaria	1986	Fertilizer loading facilities	Soda ash, heavy soda	400 t/h or 2400 bags/h	From the bagging plant or resp. The bulk store the bags or bulk resp. Are transported on belt conveyors to the shiploaders. 2 shiploaders each 400 t/h or 2400 bags s/h, 12 curved belt conveyors, 6 collecting roller conveyors, 1 mobile vacuum belt cleaner system, 5 belt conveyors with a total conveying length of 2343 m.
76	Egyptian Cement and Pipes Company	Degla, Beni Suef, El Minya Egypt	1986	Clay crushing plant	Clay	300 t/h	Clay arriving on lorries, grain max. 500 mm, is transported by an apron feeder to a pre-crusher, where the clay is pre-crushed; it is then conveyed by a throughed belt conveyor to an after-crusher, reduced to grain max. 50 mm and is then discharged from 2 throughed belt conveyors optionally to 2 conical piles. 2 lorry feeding hoppers, each 25 m <sup>3</sup> , 2 pre-crushers each 300 t/h, 2 after-crushers each 300 t/h, 2 apron feeders each 14 m, belt conveyors of a total conveying length of 189 m.
77	Maschinoimport Moscow	Juschnyj Ukraine	1987	Phosphate handling plant	Phosphate	1.35 t/m <sup>3</sup> 1200 t/h	By 2 continuous ship unloaders phosphate is unloaded from ships and transported on belt conveyors directly to an intermediate store. A full-automatic portal reclaiming scraper reclaims the material from the store for having this further transported by belt conveyors to the wagon loading station and loaded on trains. 2 continuous ship unloader each 800 t/h, 1 stacker 1200 t/h, 1 portal reclaiming scraper 1200 t/h, 1 storage building for 70,000 t, 2 wagon loading lines each 600 t/h, 2 sampling plants, 2 remote-controlled switcher locomotives, dust plants, 17 belt conveyors of a total conveying length of 1850 m.
78	CNTIC China National Technical Import Corp. Beijing	Quinhuangdao China	1987	Conveying and loading facilities	Pit coal	0.9 t/m <sup>3</sup> 2 x 5000 t/h 3 x 6500 t/h	The coal arriving on trains is unloaded by 2 wagon dumpers and is transported to 4 storage piles of a total holding volume of approx. 1,500,000 t. After having been reclaimed by bucket-wheel machines that coal is conveyed to shiploaders and is loaded in ocean-going ships. - 2 wagon dumpers, 2 stackers each 5000 t/h. 3 bucket wheel machines each 6500 t/h, 3 shiploaders each 6500 t/h, 25 belt conveyors of a total conveying length of approx. 12,500 m.

## Combined Materials Handling Systems

No.	Purchaser	Location	Year of Const.	Type of the Plant	Materials handled	Handling Capacity	Description and Composition of the Plant
79	Preussag Anthrazit GmbH Ibbenbüren	KW Ibbenbüren Germany	1987	Coal transport and blending plant	Pit coal	1.1 t/m <sup>3</sup> 1,100 t/h	After the raw coal to be washed has been extracted from a bunker, the material is conveyed to the blending store. Following a careful reclaiming by means of a carrying cells machine the coal is conveyed to the washing plant. - 1 stacker 1100 t/h, 1 carrying cells reclaimers 1100 t/h, 6 belt conveyors of a total conveying length of approx. 820 m.
80	Maschinoimport Moscow	Juschnyj II Ukraine	1988	Phosphate handling plant	Phosphate	1200 t/h	By 2 continuous ship unloaders phosphorite is unloaded from ships and transported on belt conveyors directly into wagons or to intermediate stores. Full-automatic portal reclaiming scrapers reclaim the material that is then transported by belt conveyors to the wagon loading station and is loaded in trains. Material transport between the two stores is also possible. - 2 continuous ship unloaders each 800 t/h, 2 stacker each 1200 t/h, 2 portal reclaiming scrapers each 1200 t/h, 2 storage buildings each 70,000 t, 2 wagon loading lines each 600 t/h, 2 sampling plants, 2 remote-controlled switcher locomotives, dust plants, 22 belt conveyors of a total conveying length of 2500 m.
81	Vulcan Industries Inc.	Calica, Mexico	1988	Cement plant	Limestone	3175 / 5000 t/h	
82	Preussen Elektra KW Staudinger REA-Block 3	Hanau Germany	1989	Gypsum transport and loading facilities	REA-Gypsum	1.0 t/m <sup>3</sup> 150 t/h	After having run over the filter belts the gypsum is conveyed to a storage building; from there the gypsum is reclaimed by semi-portal reclaiming scraper and is transported to wagon loading on 2 rail tracks. Future bare loading is planned. - 1 semi-portal reclaiming scraper 150 t/h, 8 belt conveyors of a total conveying length of approx. 480 m.
83	Phelps Dodge	Moreci, Arizona USA	1989	Copper mine and plant	Copper ore		Two crushers, in-plant conveyors

## Combined Materials Handling Systems

No.	Purchaser	Location	Year of Const.	Type of the Plant	Materials handled	Handling Capacity	Description and Composition of the Plant
84	IBN-AL-BAYTAR Al Jubail Saudi-Arabien over TPL, TechniPetro, Rom	Al Jubail Saudi Arabia	1990	Conveying and loading facilities for Fertilizer and raw materials	Urea, NPK, DAP, GTSP	1.1 - 1.5 t/m <sup>3</sup> 400 t/h or 2000 bags/h	After fertilizer has been reclaimed from the storage building the material is loaded over belt conveyor system and combined shiploader/unloader into ships. Loading of bagged fertilizer is also possible through 5 lorry unloading facilities and subsequent belt conveyors as well as combined shiploaders/unloaders. Using the same machines phosphate and potassium is unloaded and transported to a lorry loading station. - 5 lorry loading facilities, 2 combined loaders/unloaders each 400 t/h (2000 bags/h), 14 belt conveyors of a total conveying length of approx. 1500 m.
85	V/O Techmashimport Moscow	Odessa Ukraine	1990	Extension of the Urea handling plant	Urea	0.7-0.86 t/m <sup>3</sup> 1000 t/h	In order to increase the loading capacity has been added another belt conveyor line from the storage building to the quay, including also a shiploader and checkweighing equipment. - 1 shiploader for bulk 1000 t/h, 12 belt conveyors of a total conveying length of approx. 900 m, 1 checkweighing equipment.
86	Stadtwerke Düsseldorf	KW-Lausward Düsseldorf Germany	1991	Power station coaling plant	Pit coal	0.9 t/m <sup>3</sup> 800 t/h	Coal arriving in self-discharging wagons is unloaded by mechanical opening and closing mechanism into underground bunkers. For operation during the winter season provision has been made for defrosting facilities. After the coal has been extracted from the bunker by chain conveyor it is transported over belt conveyors directly into daybins or to the coal store. Reclaiming from the store by portal reclaiming scraper. - Stacker 800 t/h, full-portal scraper 360 t/h, surge bunker with dosage, 2 "Rollgurt"-conveyors 245 m, 16 belt conveyors of a total conveying length of approx. 2700 m.
87	KPC PT-Kaltim-Prima-Coal Indonesia	Tanjung Bara Coal Terminal Indonesia	1991	Coal transport, storage and loading facilities	Pit coal	0.8 - 0.9 t/m <sup>3</sup> 4730 t/h	Coal arriving from the pit by belt conveyors is stacked on a storeyard and, after having been reclaimed there, it is loaded on ships. - Stacker 1350 t/h, stacker/reclaimer 4730 t/h, 2 shiploaders 4200 t/h, bucket wheel machine 3300 t/h, 9 belt conveyors of a total conveying length of approx. 4900 m.
88	Maschinoimport Moscow	Vostochnyj GUS	1991	Coal transport, storage and loading facilities	Pit coal	0.8 - 1.1 t/m <sup>3</sup> 3600 t/h	2nd extension of an existing plant including additional belt conveyors, stockyard machines, shiploaders and dust plant: - Stacker 3000 t/h, 2 bucket wheel machines each 3600 t/h, 17 belt conveyors of a total conveying length of approx. 4500 m.
89	RNAG Ruhrkohle Niederrhein AG Dortmund	Kokerei Kaiserstuhl Dortmund Germany	1992	Coking coal transport and preparation plant	Pit coal	0.8 t/m <sup>3</sup> 1200 t/h	Coal arriving in trans and lorries is unloaded into an underground bunker, then transported to a milling plant and after that to a homogenization store. From the store the coal is reclaimed by a bridge-type scraper and transported to a mixing plant, where fuel oil, reactive agents and coke dust are admixed. Thereafter transport to the coal tower with sampling. An emergency coaling is available - Stacker 1200 t/h, bridge-type scraper 500 t/h, 12 belt conveyors of a total conveying length of approx. 1350 m, 2 bunker extraction facilities, 18 vibration feeders, 2 screens, 2 mills each 600 t/h, mixer 500 t/h, sampling plant, dust plant, fire fighting plant, pile irrigation system.

## Combined Materials Handling Systems

No.	Purchaser	Location	Year of Const.	Type of the Plant	Materials handled	Handling Capacity	Description and Composition of the Plant
90	AES Hawaii	Barbers Point, Hawaii, USA	1992		Coal, Limestone, Clinker, Gypsum, Sand, Slag	1415 tph	1 continuous ship uploader 1415 MTPH, 1 pipe conveyor system 1134 MTPH.
91	ISPAT Mexicana	Mexico	1994				Bucketwheel stacker/reclaimer
92	El Abra	Calama, Chile	1995	Dry ore processing plant	Copper ore	conveyors 760 - 3,600 t/h belt feeders 760-8,600 t/h	17 in-plant conveyors and 22 inplant belt feeders. The belt feeders are located in the primary and tertiary crushing and screening plant. The conveyors move the material between the stockpile, the secondary and tertiary crusher, and the tertiary screen.
93	Israel Electricity Company Haifa Israel	P. S. Hadera Hadera Israel	1996	Coal handling plant for power station	Coal	0.8-1.0 t/m <sup>3</sup> 4500/1000 t/h	Coal arriving from the ship unloaders outside the power plant is transported to the stockyard or split with a part to stockyard and the other part directly to the surge bin of coal bunkers. The stored coal can be reclaimed by a combined bucket wheel stacker-reclaimer via the sampling station to the surge bin. From there coal will be discharged by belt feeders and via tripper car to coal bunkers – Bucket wheel stacker-reclaimer 4500/1000 t/h; 12 belt conveyors 4500/1000 t/h with a total length of 5080 m; 2 tripper cars to coal supply to bunkers 1000 t/h; 1 sampling station; 1 surge bin with 2 belt feeder 300-1000 t/h; belts scales, dust collection and water spray system.

## Combined Materials Handling Systems

No.	Purchaser	Location	Year of Const.	Type of the Plant	Materials handled	Handling Capacity	Description and Composition of the Plant
94	Los Angeles Export Terminal	Los Angeles, California, USA	1997	Bulk export/storage facility	Coal	9000	1 shiploader 9000 mtph, 1 traveling bridge stacker 7000 mtph, 1 radial stacker 1814 mtph, plant conveyors 7000 mtph handling ships to 250,000 DWT.
95	Radomiro Tomic	Santiago, Chile	1997	Mining and ore storage facility	Copper coarse ore	9615 t/h	The overland conveyor transports copper ore from the primary crushing stations next to the mine to the coarse ore stockpile where a shuttle conveyor stacks the ore.
96	Barrick Pierina	Peru	1998	Overland Conveyor	Crushed Gold Ore	2,000 mtph	2,400 m overland conveyor running steeply uphill delivering fine crushed gold ore to the leach dump area
97	Minera Los Pelqambres	Chile	1999	Overland Conveyor	Coarse Crushed Copper Ore	8,700 mtph	3 downhill conveyors in line running downhill trough a tunnel. The total length of the conveyor system is 12,700 m and the installed power is 10 x 2,500 kW = 25 MW. The system is regenerative and produces about 22 MW at full capacity. Belt rating is ST 7800.
98	Israel Electricity Company Haifa Israel	P. S. Rutenberg 2 Rutenberg Israel	1999	Coal handling plant for power station	Coal	0.8-1.0 t/m <sup>3</sup> 4500/1000 t/h	Coal arriving from the ship unloaders outside the power plant is transported to the stockyard or split with a part to stockyard and the other part directly to the surge bin of coal bunkers. The stored coal can be reclaimed by a combined bucket wheel stacker-reclaimer via the sampling station to the surge bin. From there coal will be discharged by belt feeders and via tripper car to coal bunkers – Bucket wheel stacker-reclaimer 4500/1000 t/h; 12 belt conveyors 4500/1000 t/h with a total length of 5080 m; 2 tripper cars to coal supply to bunkers 1000 t/h; 1 sampling station; 1 surge bin with 2 belt feeder 300-1000 t/h; Bunker weighing system; Belt scales; dust collection and water spray system.

## Combined Materials Handling Systems

No.	Purchaser	Location	Year of Const.	Type of the Plant	Materials handled	Handling Capacity	Description and Composition of the Plant
99	Coastal Aruba	Dutch West Indies	1999-2000	Petroleum Coke processing plant	Petroleum Coke	2000	3 telescoping ship loaders, 1 portal reclaimers, tripper conveyor, in-plant conveyor systems. Ship size 30,000 - 50 000 DWT. Petroleum coke is conveyed from the plant to the storage building where it is reclaimed by the portal reclaimers and conveyed to the shiploaders.
100	HITACHI Ltd. Japan	ILO P. P. Peru	1999	Coal handling plant for power station	Coal	0.8-1.0 t/m <sup>3</sup> 1500/600 t/h	Coal incoming per ships to be unloaded by 2 grab crane and transferred to the stockyard with one slewing and luffing stacker. Coal is reclaimed by 2 portal scraper reclaimers to the coal bunkers - 2 grab cranes 750 t/h for ships up to 80,000 dwt; 1 stacker 1500 t/h and 2 reclaimers 250 t/h; 12 belt conveyors with a total length of 3500 m.
101	SPIC	SPIC Fertilizer Plant Dubai	2000	Urea handling plant	Urea	0.7-0.86 t/m <sup>3</sup> 60/500 t/h	Urea coming from the processing plant is temporarily stored in a cover storage with stacking conveyor and portal scraper reclaimers. The product is reclaimed by the scraper and conveyed to the port and loaded by shiploader in ocean-going ships. - 1 stacking tripper car 60 t/h, 1 full-portal scraper 500 t/h, 1 shiploader each for 500 t/h, 1 pipe conveyor of 208 m length and 3 belt conveyors with total conveying length 500 m.
102	Snampogetti, Italy	Bahia Blanca Fertilizer plant Argentina	2000	Urea handling plant	Urea	0.7-0.86 t/m <sup>3</sup> 100/1250 t/h	Urea coming from the processing plant is temporarily stored in a covered storage with stacking conveyor and portal scraper reclaimers. The product is reclaimed by the scraper and conveyed to the wagon/truck loading station or to the port and loaded by shiploader in ocean-going ships. - 1 stacking tripper car 60 t/h, 2 full-portal scraper each for 1500 t/h, 1 shiploader for 1250/1500 t/h, 1 wagon/truck loading station; belt conveyors with total conveying length 2000 m.
103	Port of Fujaira Fujaira U.A. E.	Fujaira U.A. E.	2001	Aggregates handling plant	Aggregates; crushed stones	2000 t/h	A new truck dumping station, complete with 4 hoppers is installed at the beginning and integrated with the existing unloading station into the middle of the conveyor line. In total 7 individual belt conveyor are installed to transport the material from the quarry to the new shiploader which can load ships up to 80,000 dwt at 2000 t/h. For environmental reasons, a dust collection unit is located at each transfer point. The complete handling system is controlled by the onboard PLC system of the shiploader through a substation - 1 truck dumping station with 4 hoppers; 7 belt conveyors of total length 3300 m; 1 shiploader 2000 t/h.

## Combined Materials Handling Systems

No.	Purchaser	Location	Year of Const.	Type of the Plant	Materials handled	Handling Capacity	Description and Composition of the Plant
104	Hovenssa	US Virgin Islands	2001	Green Coke facility	Green Coke	1700	2 circular stacker/reclaimers in concrete domes , in plant conveying systems, 1 radial shiploader 1700 mtph handling ships size 30,000 - 65,000 DWT.
105	Uhde GmbH Dortmund Germany	Qafco Qatar	2003	Urea handling plant	Urea	0.7-0.86 t/m <sup>3</sup> 100/1250 t/h	At the exit of production plant, urea is picked up by two conveyors at a total rate of 200 t/h and transferred two warehouses of 75,000 t each. The material is distributed to the stockpile by a tripper car. Each warehouse is equipped with a portal reclaimer with a maximum rate of 1,250 t/h on to a belt conveyor. The reclaiming rate can be adjusted to the requirements of further processing and loading. One conveyor line transports the granules at a rate of 1,250 t/h to a pier conveyor equipped with a tripper car for ship loading. The shiploader transfers the material from the pier conveyor to Panamax vessels of to 60,000 dwt - 2 portal scraper reclaimers 1250 t/h; 1 shiploader 1250 t/h, 6 belt conveyor with a total length of 2000 m.
106	Compania Minera Dona Ines de Collahuasi (Roasio Transition Project)	Chile	2003	Overland Conveyor	Coarse Crushed Copper ore	8,500 mtph	3 overland conveyors delivering coarse crushed copper ore from the primary crushing station to the mill. The third conveyor is regenerative and has a single horizontal curve. Total installed power is 9 x 2,000 kW = 18 MW.
107	Coal Terminal A.S. Tallinn, Estonia	Muuga, Tallinn Estonia	2004/05	Coal handling plant for coal terminal	Coal	0.85-1.1 t/m <sup>3</sup> 2000 t/h	A new railway car unloading station, comprising a wagon tippler , 2 hoppers and a belt feeder is installed at the incoming line of the terminal. In total 6 individual belt conveyors are installed to transport the material from the unloading station to the stockyard or to the new shiploader which can load ships up to 145,000 dwt at 2000 t/h. The stockyard with two stockpiles has a storage of max. 300,000 t capacity. A travelling and slewing stacker and a bucket wheel reclaimer are installed for the first phase on the stockyard. Before the coal to be stored or loaded to ship, a crusher station with a TKF-made roll sizer is installed to break the sizes of coal down to 50 mm. For incoming and outgoing line magnetic separators and belt scales are installed. For the outgoing line a sampling station is arranged for monitoring the coal quality. For environmental reasons, dust collections and water spray dust suppression system is planned to incorporate. The complete handling system is controlled by the PLC centre control station on the terminal.
108	Ishikawajima-Herima Heavy Industries Co. Ltd., Japan For SKS, Malaysia	Tanjung Bin, State Johor Malaysia	2005	Coal handling system for power plant	Coal	0.8-1.0 t/m <sup>3</sup> 2x2000 t/h 4000 t/h 2x1400 t/h	Coal incoming per ships to be unloaded by 2 continuous ship unloaders and transferred via two lines of conveyors to the stockyard with three combined bucket wheel stacker-reclaimers. Coal is reclaimed by either two of the three BW machines to the coal bunkers - 2 continuous ship unloaders, 2,000 t/h each for ships up to 150,000 dwt; 3 combined BW stacker-reclaimers 4,000/1,400 t/h each; 12 double-line belt conveyors with a total length of 7,000 m.

## Combined Materials Handling Systems

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109	Babcock Kraftwerkstechnik GmbH for EUAS (Elektrik Üretim Anonim Sirketi Genel Müdüriüğü, Ankara, Turkey	Afsin Elbistan B Termik Santral Santiyesi Koglihan Kahraman-maras, Turkey	2005/06	Coal handling system for power plant	Lignite	6000/4500	Complete coal handling system with 3 stackers, 3 reclaimers, conveyors, crusher house incl. dedusting and vacuum cleaning, internal coal handling system, bunker feeding system, 24 blendomats, mill feeder



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