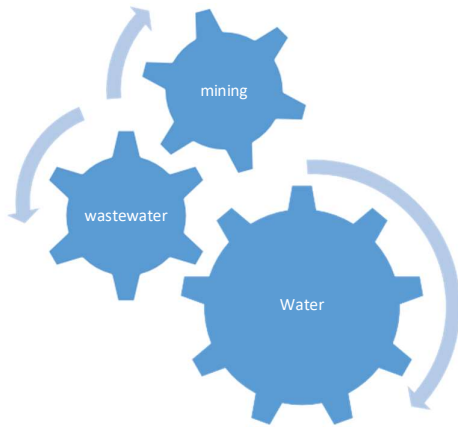


Your Local Partner in Innovation & Technology"



DENSEP was established in 2009 since then we are offering EPC solution in water, wastewater, solid waste and mining technologies.



We have practical multi-discipline expertise in Engineering, procurement and contracting detailed design engineering and project management in both Greenfield and Brownfield projects of water, wastewater, mining, environmental process, and solid waste. We pride ourselves on our ability to create fit for purpose, high return engineering solutions for our Clients.



WATER/WASTEWATER PROFILE

OUR LEADERSHIP TEAM

Imad Najeeb

Director/Principal Engineer (Water and Wastewater)
BE Chem, ME Process Engg (UNSW, Australia), MIENGAus PhD scholar

Mir Alimuddin Wasif

Principal Structural Engineer Civil
BE Civil, MS Structural (University of Iowa USA)

Munawar Mansoor

Lead Engineer Mechanical
BE Mech, MS Mech (University of Ottawa, Canada)

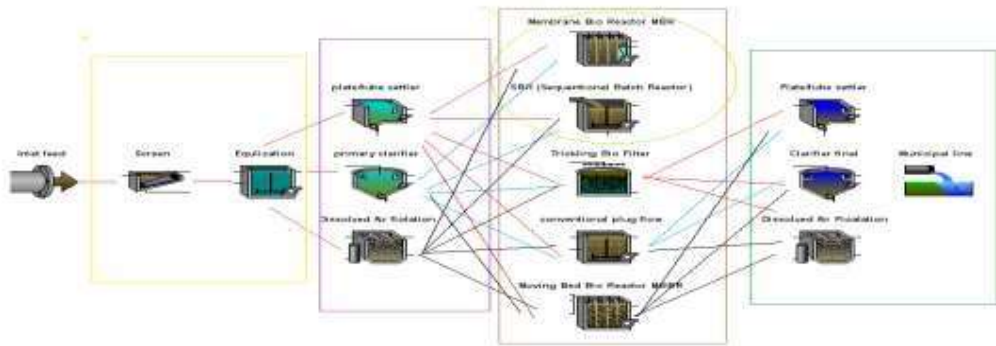
Meer Rehaman

Sr process engineer Water/Wastewater
BE Chem, ME Chem

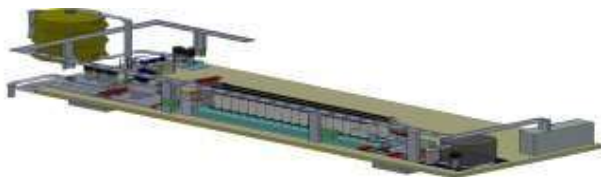
Dense water and wastewater Selected projects

Technologies we are offering in wastewater;

Our process design expertise in MBR, SBR, MBBR, Anaerobic and Trickling biofilters.



Naduro Sugar Power plant 47 m3/hr RO + CEDI 2011



Package Plant Sewage Treatment Plant, Karachi 2014
Capacity 5000 GPD 2014

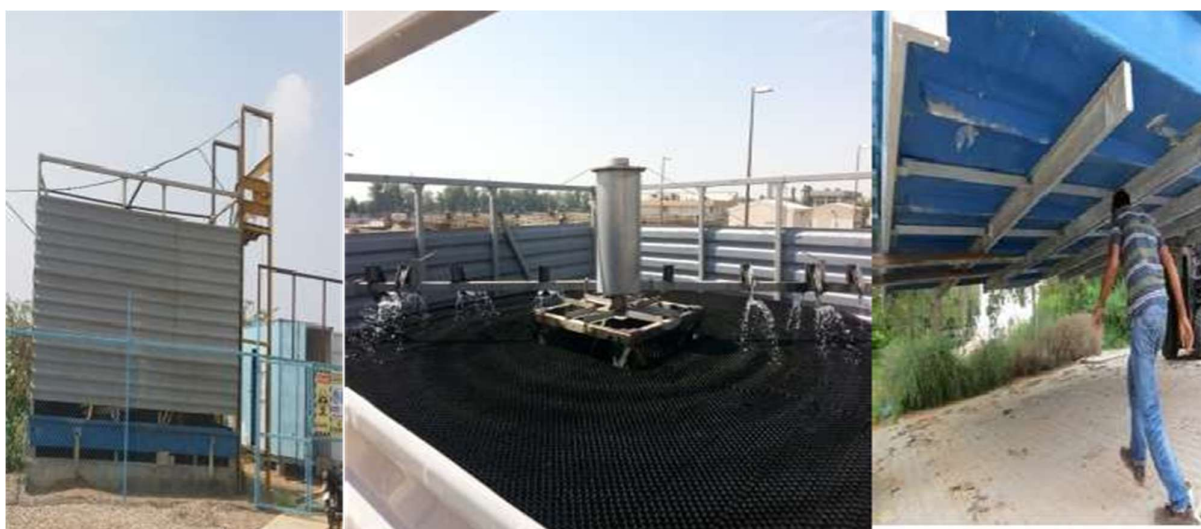
1 MGD Ultra filtration Plant, Badin, Pakistan 2012



Installation of 6 MGD MBBR Sewage Treatment Plant Sindh , Pakistan 2016



SBR Effluent Treatment Plant for Sugarmill , Pakistan 2017



Design and Engineering of 100,000 GPD Trickleing Bio Filter Sewage Treatment Plant, Karachi, Pakistan 2014



Design and Engineering of 12000 GPD Containerized Reverse Osmosis Plant and STP , Karachi, Pakistan 2018



Design and Engineering of 50,000 GPD Packaged SBR Plant for K2 power plant, Pakistan 2018



Design and Engineering of 1.4 MGD Water Treatment in Filtration plant, Islamabad, Pakistan 2019

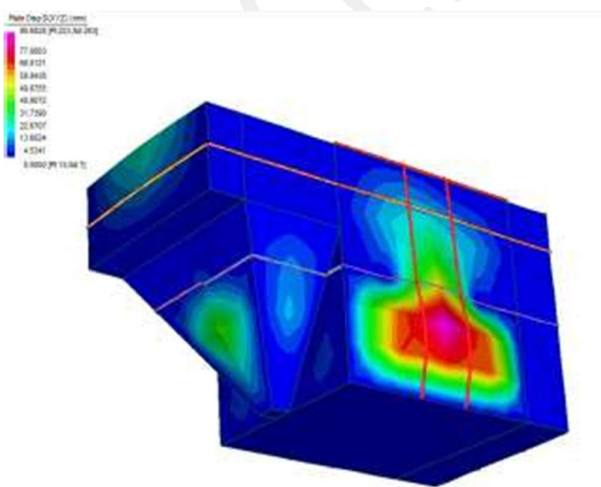


Design and Engineering of 350,000 GPD Dissolved Air floatation and sludge bagging table for Unibro Textile ETP 2019.

DENSEP



Fabrication of HUBCO Narawal Sewage Treatment plant 2011



Design, engineering, fabrication and commissioning of package steel Sewage treatment plant for HUBCO



**Design and Engineering of 14 MGD Sea Water Intake and pumping station at Karachi , Hawaks bay, Pakistan
2015**



Various RO plant of different capacity

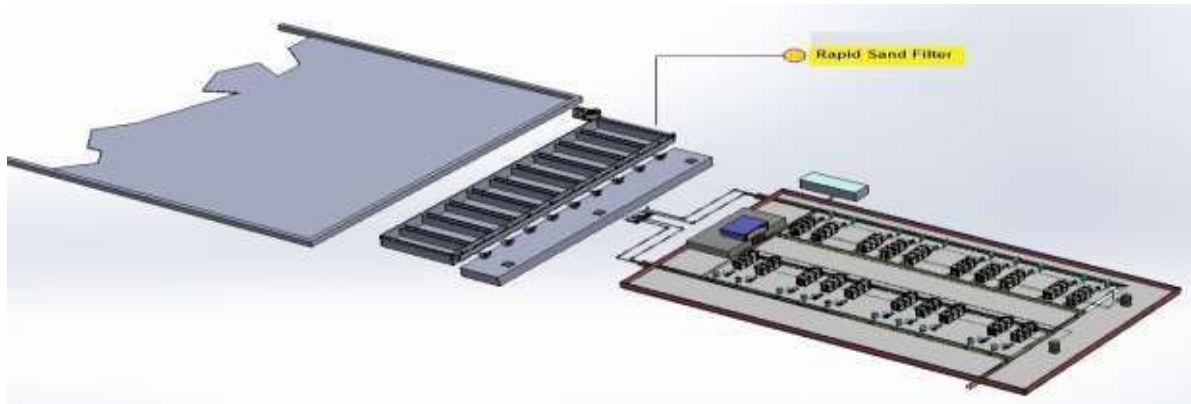
ICI Pakistan RO plant with hot water sanitizable membrane 2020



Project Nabisar 24 IMD RO Desalination plant at Tharparkar (under execution)

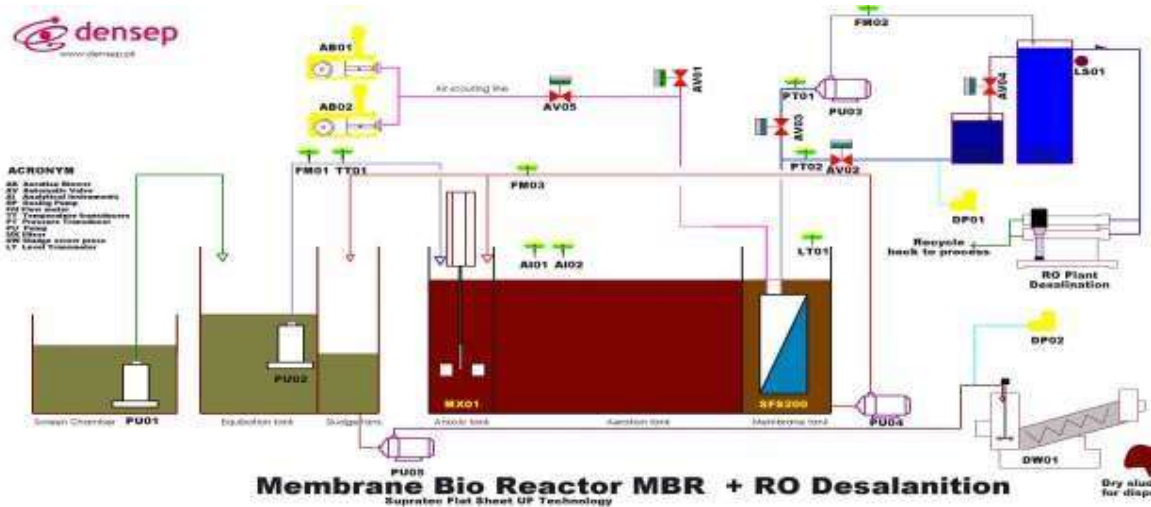
Water source LBOD canal

Scope of Work Process design, mechanical design, electrical and automation, material selection, BOQ and project execution from fabrication of skid to complete piping and fitting to plant commission. *Pre-treatment, Desalination and post treatment*





C

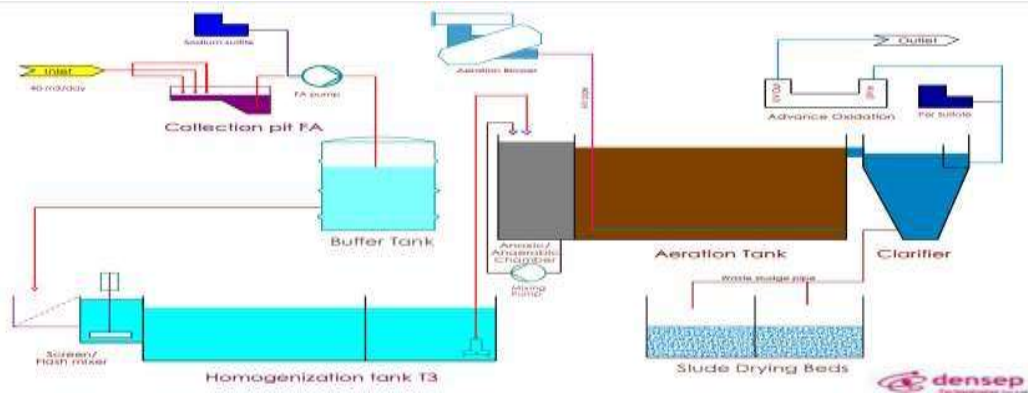


Date 2022 (Design, engineering, fabrication and commissioning of MBR package steel plant 2022) AMPL



Effluent treatment plant extended aeration package type for Geofman pharmaceutical 2021

DENSA



Effluent treatment plant package type for formaldehyde Industry Dynea Pakistan, Hub Baluchistan 2021

Artistic Milliners Port Qasim AMPQ effluent treatment plant ETP REDESIGN/PROCESS VALIDATION



AERATION TANK



EQLIZATION TANK



Wastewater equipments installation





Solid waste Composting and Resource recovery



Densep Pilot windrows at University of Karachi 1 ton/day capacity

Design capacity 1 ton/day

Process type continuous windrow

Sorting Manual sorting

Waste type Campus waste mainly organics

Monitoring Humidity and temperature

Results

Waste reduction

Reduce 480 kg weight to 35 kg in 22 days single run

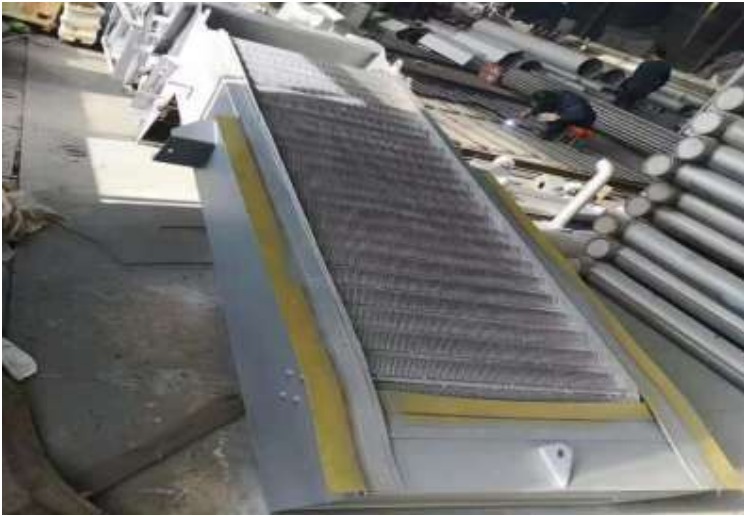
Bulking agent grass straws

Water and Wastewater Products

Following are the water and wastewater equipments and plant that we can designed and fabricated in our facility.

Equipments	Specifications
Backward and Forward Clarifier	Up to 15 meter width
Half bridge and full bridge circular clarifier	Up to 37 meter diameter
Mechanical brush screen	1 MGD capacity
Dissolved Air floatation	1500 total suspended solid load
Skid mounted electro-coagulation system	40 KW
Package MBR, SBR and other STP units	50,000 GPD
Ultra filtration plants	Any capacity
Skid mounted Rapid sand filter	50,000 GPD
SBR decanters	12 inch out diamter
Submerged Horizontal flocculators	10 meter width tank
Top mounted floculators	Any capacity
Reverse Osmosis plant	Any capacity
Trickle bio filter arm	Up to 42 meter diameter
Sand Trap/Grit removal	





Vertical mechanical screen fabricated in our workshop



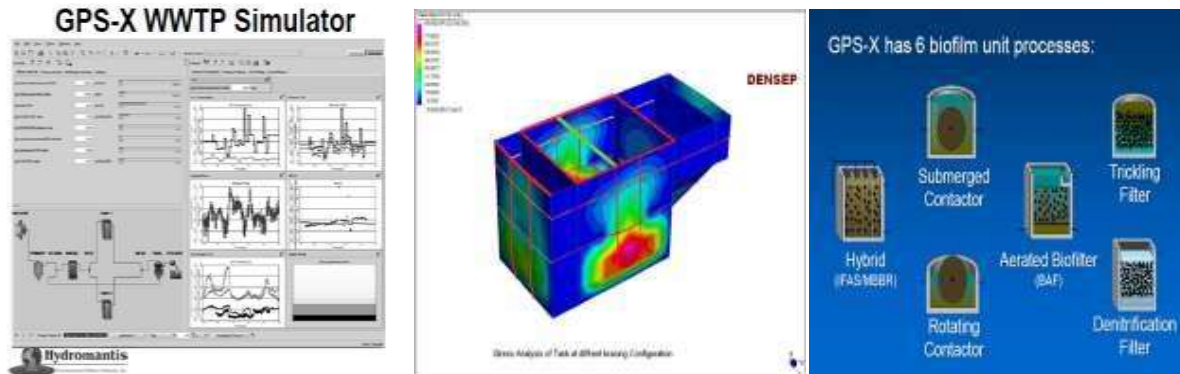
Oil skimmer



Design , fabrication and installation of fix bridge thickener 8 meter dia

Process and mechanical design Softwares

We utilize **Licensed GPS-X** process design software for design and modelling of wastewater treatment plant. For mechanical and structural design we use STRAND and solid works.



Water and sewerage supply network, storm water and Infrastructure design

- water source identification
- surface water intake, ground water intake (tube wells etc.)
- water transmission main
- water & Sewerage pump station
- water distribution network
- water demand estimation

Stormwater:

- Hydrological studies (water shed analysis, IDF curve generation etc.)
- storm water collection network
- storm water disposal alternate solutions (retention ponds, percolation wells etc.)

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DENSEP TECHNOLOGIES

Tools and machines

- HDPE Jointing machines up to 22 inch
- High performance welding plants
- Alignment tools
- On site shaft alignments tools
- Scaffold folds and manual lifting hoists
- Confined space pressure blasters
- Core cutting tools
- Sand blasting
- Leak detectors and flow monitoring
- And various testing kits/motorized tools



HDPE hydraulic jointing machine



Digital theodolite for level marking



Rotary Laser spot marking equipment



Electro fusion moulding machine

Initial Date of Registration In PEC: Mar 08, 2023



Scan QR code to view details.



Serial No. **544148**
PEC-II

PAKISTAN ENGINEERING COUNCIL
Licence No: **81589** Category: **C6** Validity: **30 June, 2023**
LICENCE OF PAKISTANI CONSTRUCTOR/OPERATOR
(Under the bye-laws of Pakistan Engineering Council 1987)

This is to certify that M/s DENSEP (Licensee), with its registered office at UNIT NO. 304, 3RD FLOOR, TOWER-02, SECTOR-40, COMMANDER HEIGHTS, SCHEME-33, JINNAH AVENUE MALIR CANTT, KARACHI have been licensed under Construction and Operation of Engineering Works Bye-laws 1987, until the validity date to construct/operate engineering works, the construction/capital cost of which does not exceed Rs. 25 (TWENTY FIVE) million provided the licensee fulfill all the qualification requirements prescribed by Client or Employer for a particular engineering work; and subject to the licensee continuing to fulfill all the requirements of the bye-laws.

Field of Specialization: EE01 - EE02 - EE03 - EE04 - EE05 - EE07 - EE08 - EE10 - EE11 (Solar Energy system) - EE11 (General Electrical Works Only) - (TEN ONLY) (Specialization Code Nos. for detail see overleaf)

Date of Issue: Mar 8, 2023
(Karachi)



Registrar
Pakistan Engineering Council,
Islamabad.

- Note:
1. If a firm does not get renewal of its licence within a year after expiry of its licence, the firm may be renewed after payment of outstanding fee if entire defaulting period plus surcharge at the rate of 5% of defaulting fee amount, or as prescribed from time to time.
 2. The employer must ensure employment of engineers whose names are mentioned on backside of the licence. The Consulting Engineer (the Engineer in Charge in case the consultant is not appointed) shall monitor the number of engineers employed by the Constructor/Operator and inform the Council accordingly.
 3. Owner(s) of the firm shall be held responsible, if any information, document or paper submitted by him/them is found incorrect or forged.

MINING PROFILE



Your partner in innovation and technology



Material Handling & Mining Capability Statement



Densep Technologies is a leading multi-disciplinary engineering and technology company offering a broad range of services, particularly in the mineral processing, mining, water, wastewater and environment sectors. Customers are served by our in-house team of engineers as well as our external partners through out Pakistan even at remote sites.

Densep Technologies's team of engineers and technicians are highly qualified and collectively have vast experience in a broad range of fields. An open-minded approach enables Densep Technologies to offer robust and efficient solutions. The benefits of these services are improved quality, reliability and availability of plants, greater safety, avoidance of unexpected operational problems, extended life and lower life cycle operating and maintenance costs.

Densep Technologies has significant experience with most material handling and mining machines, plants, facilities and structures including

conveyors, grinding machines, scrubbers, stackers/reclaimers, chutes, hoppers, bins, vibrating screens, feeders, dozer traps, car dumpers sampling stations and ore out-loading facilities

Our services, that have been provided to **owners, operators and manufacturers**, include

End to end engineering and design of new material handling and mining systems as well as sustaining works for example conveyors redesign, in-loading plants upgrades, throughput enhancement studies and rectification services,

specifications development and design audits, finite element stress analysis,

discrete element modeling, computational fluid dynamics,

full implementation and

commissioning supports for a variety mining machines,

life extension and troubleshooting studies.

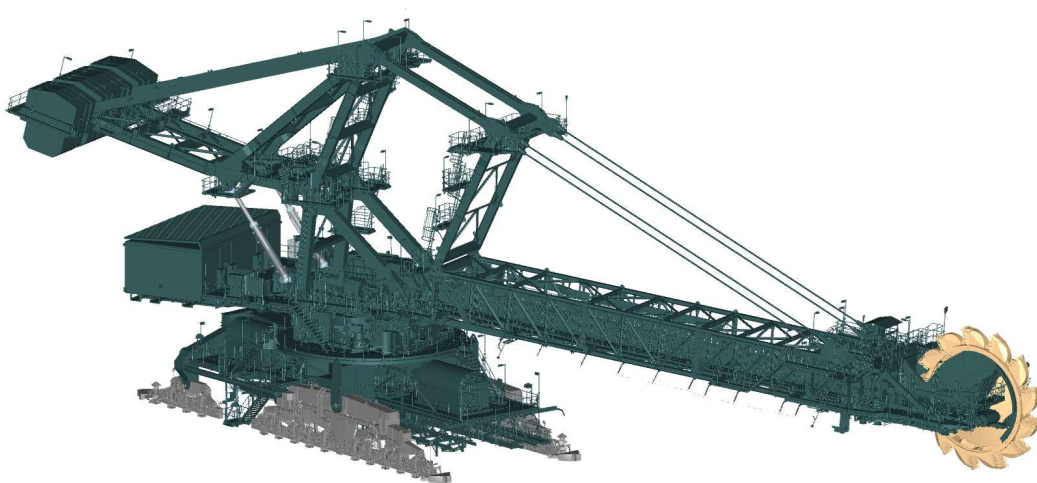
The QA system utilised by Densep Technologies includes specific procedures for design, design review, project management, site troubleshooting, post-processing, analysis and reporting.

One of Denssep Technologies expertise is the engineering associated with large materials handling equipment including stackers, reclaimers, ship loaders, conveyors and conveying systems. As an experienced designer of these type of plants, Denssep Technologies has the technical expertise to provide a wide variety of engineering services. Some of the services offered by Denssep Technologies include:

- Investigation services including design auditing, concept design study, feasibility studies, plant life extension, risk and hazard assessment.
- Project management for construction and overhaul, including complete refurbishment projects,
- Design of machinery and associated peripherals from concept through to the detailed design of individual components for manufacture. Our design engineering methodology involves finding a solution based on innovative thinking, knowledge and engineering expertise.
- Complete electrical services including power reticulation design, control systems design and PLC programming,
- Procurement services including supply contract management, quality assurance in manufacture, etc.

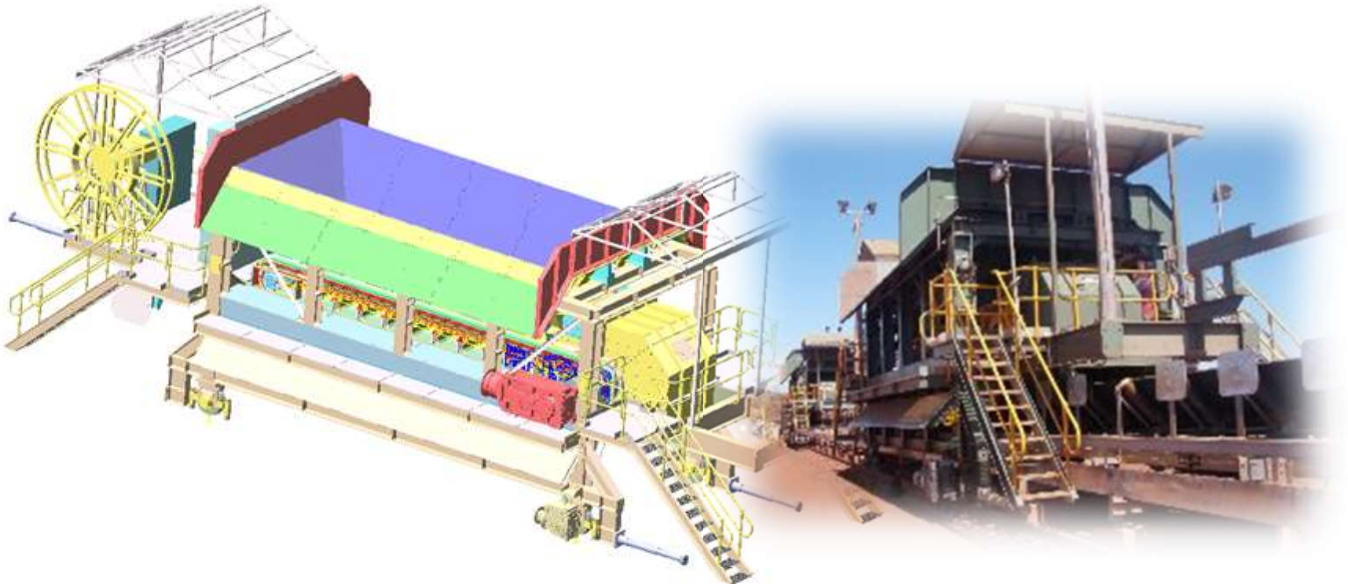
Stacker Reclaimer Thar Coal Handling Plant

Upon SECMC (Sindh Engro Coal Mining Company) request, Denssep Technologies had undertaken a detailed engineering review of the stacker reclaimer design and its specification to ensure machine compliance to international standards and had advised SECMC about avoiding a number of costly non critical machine features.



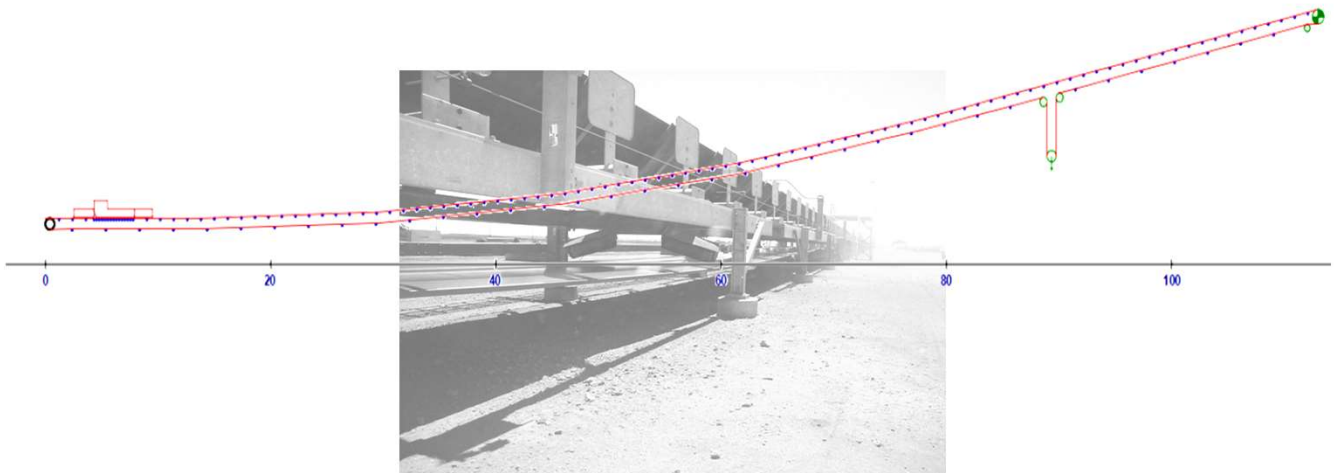
Bulking-in Hopper System

A 30 m³ dual side FEL fed hopper system was designed as a redundancy in an out loading circuit to ensure throughput continuation during reclaimer breakdowns. The machine was mobile and rail mounted over the stockpile reclaiming conveyor.



Conveyor Engineering and Design Review – Thar Coal Handling Plant

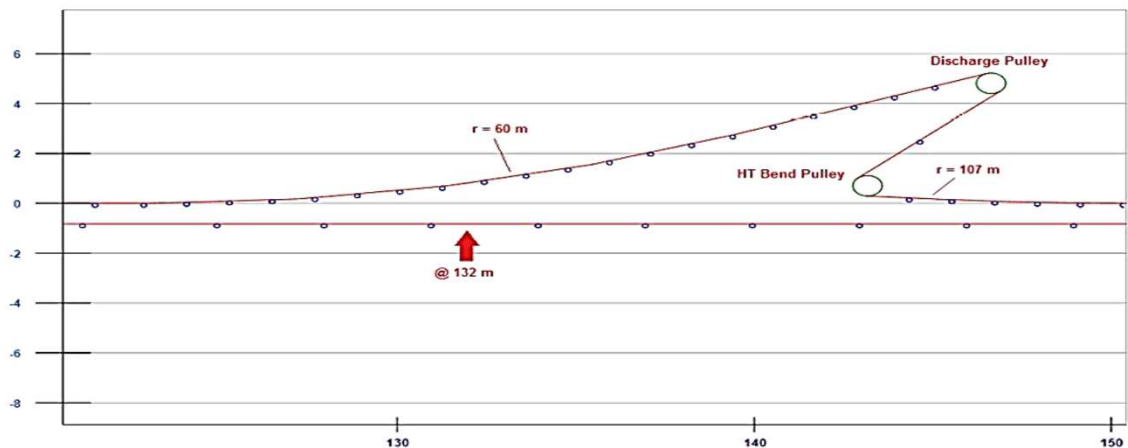
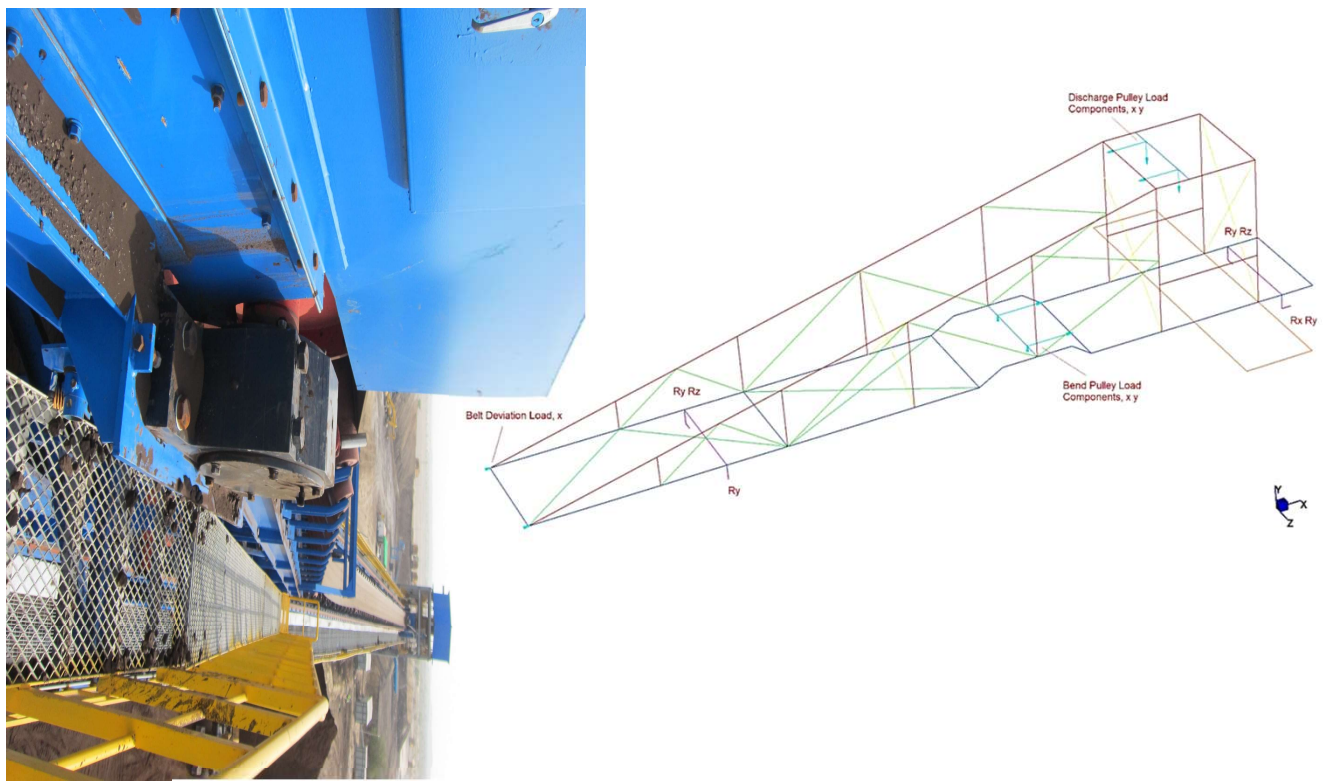
A complete engineering review of Thar Block II project conveyors 2021B, 2023A and 2024 was undertaken on SECMC request. The review involved full modeling of the entire conveyor systems from minimum available information. The review report had shown some serious shortcomings and inconsistencies. The review later helped in addressing the conveyor engineering issues in a structured manner.



Tripper Car Wind Load Assessment – Thar Coal Handling Plant

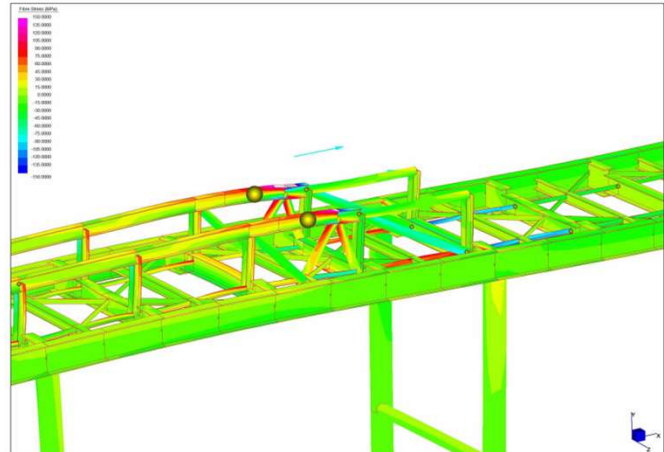
SECMC has requested Densep Technologies to carry out calculations and analysis on CV-2043 tripper car to establish operational wind load limit. This information was become desirable after few incidents when tripper car drifted, uncontrolled, forward for tens of meters.

There was a concern that uncontrolled drifting had occurred due to excessive wind events though the recorded wind speed at the time of incident was never found excessive. The assessment had ruled out the wind event as the cause of the incident and had helped SECMC formulating safe machine control and operation strategies.



Buffer Stop Frame FEA – Thar Coal Handling Plant

The buffer stop frame and installation structure was reassessed to contain impact loads from drifting tripper car. The stop frame was analyzed locally while global effects of impact loads on conveyor supporting structure were estimated using sub-modeling techniques. The analysis had resulted in an efficient redesign of the stop frame while ensuring even load distribution to supporting truss and trestles.



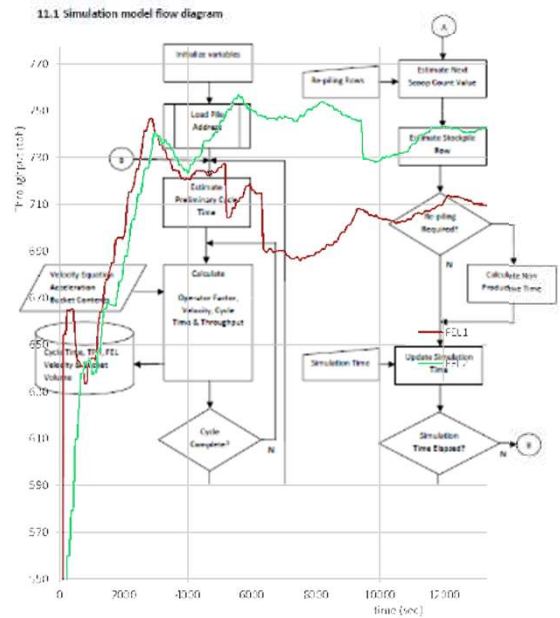
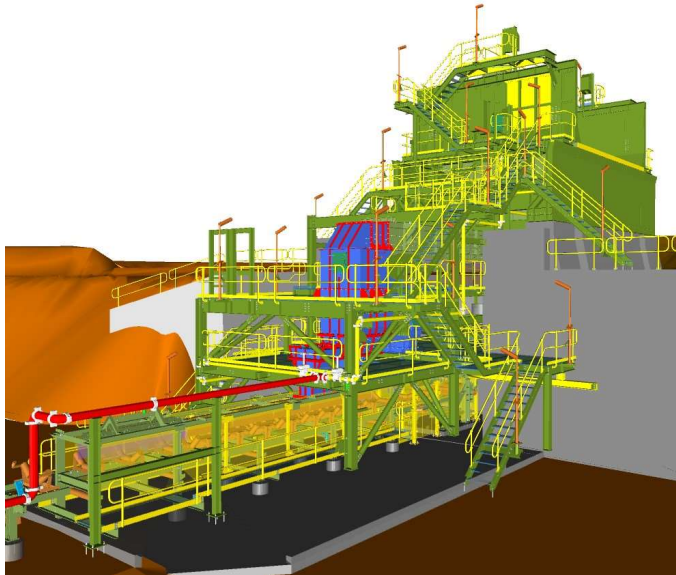
Radial Stacker Redesign – Griffin Coal Mine

The radial stacker truss, 1200 tph conveyor and the supporting carriage assembly was redesigned to extend stacking length by 10 m. The stacker was commissioned successfully and had resulted 40% increase in stockpile



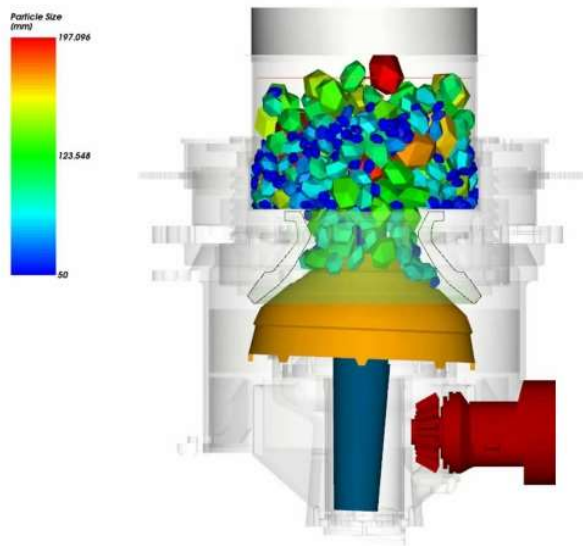
Dual Side FEL Fed Hopper Facility – Iron Ore Mine

A FEL fed hopper facility design was conceived, engineered and implemented from very high level client specifications. A desktop model to simulate plant throughput was developed from scratch to facilitate the optimum layout of the facility. The rigorous modeling and simulation had resulted in exceeding client’s throughput expectation within first six months of implementation.

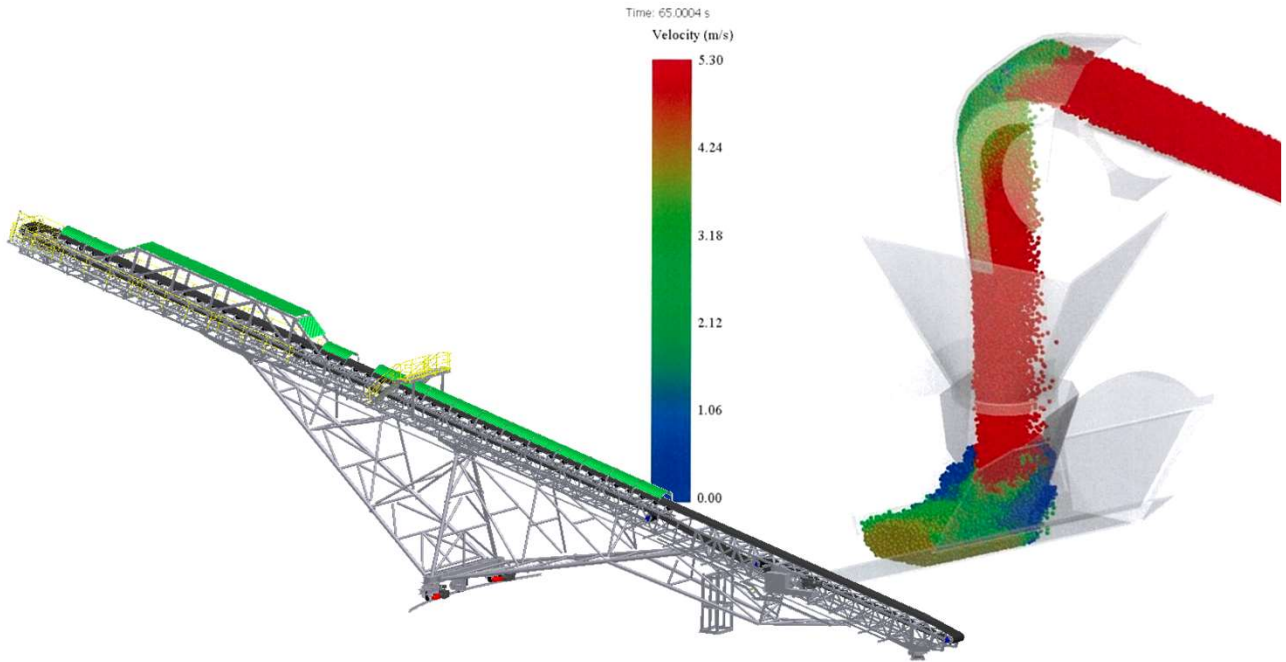


DEM (Discrete Element Modeling) Capability

Cone Crusher bogging event simulation to study overload capacities

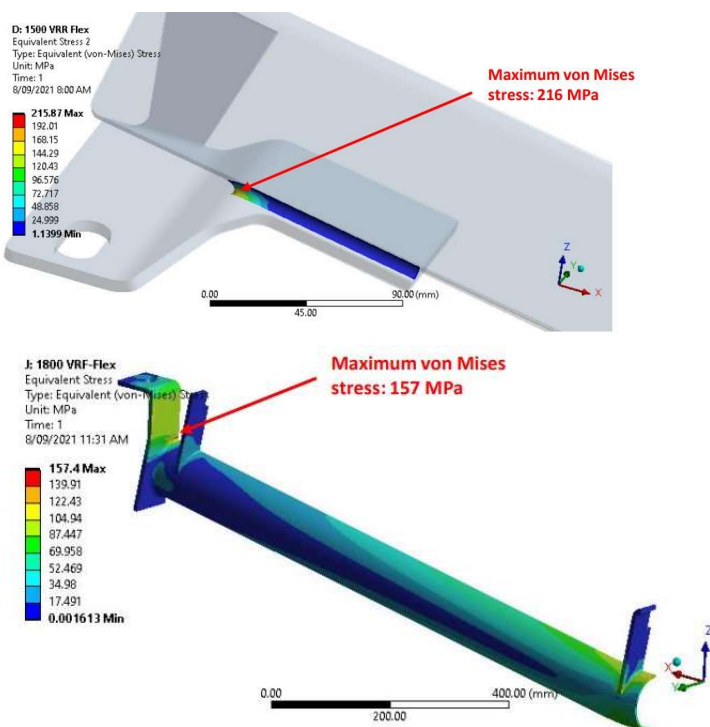


DEM model of a radial stacker chute for Lihir gold mine to investigate liners wear issues.

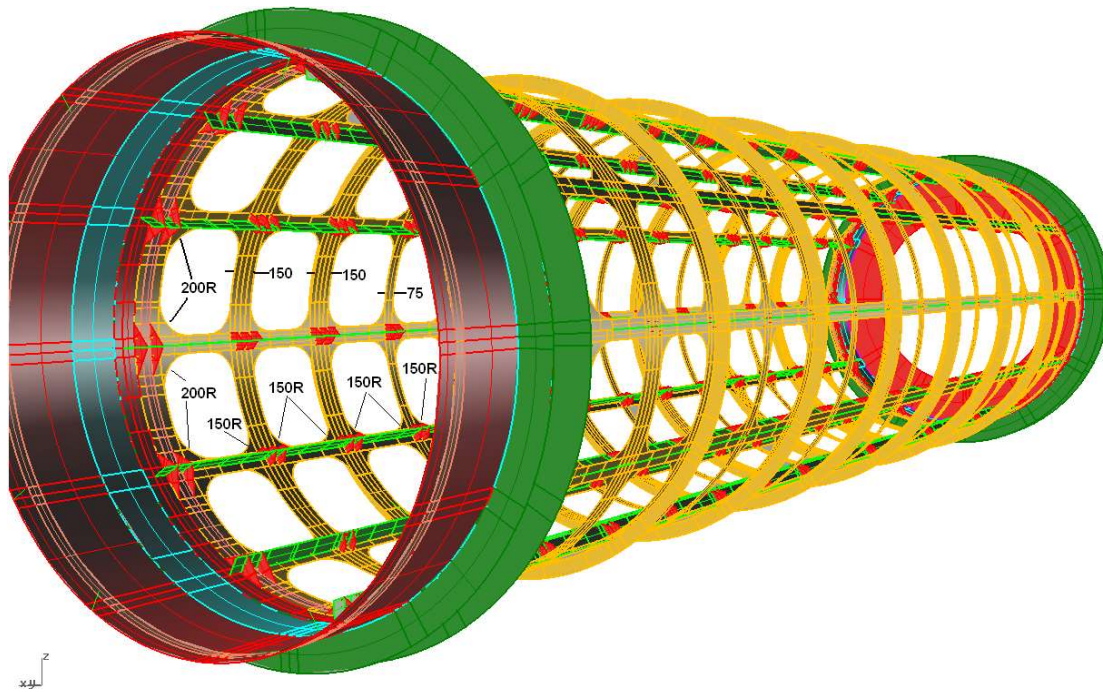


FEA (Finite Element Analysis) Capability

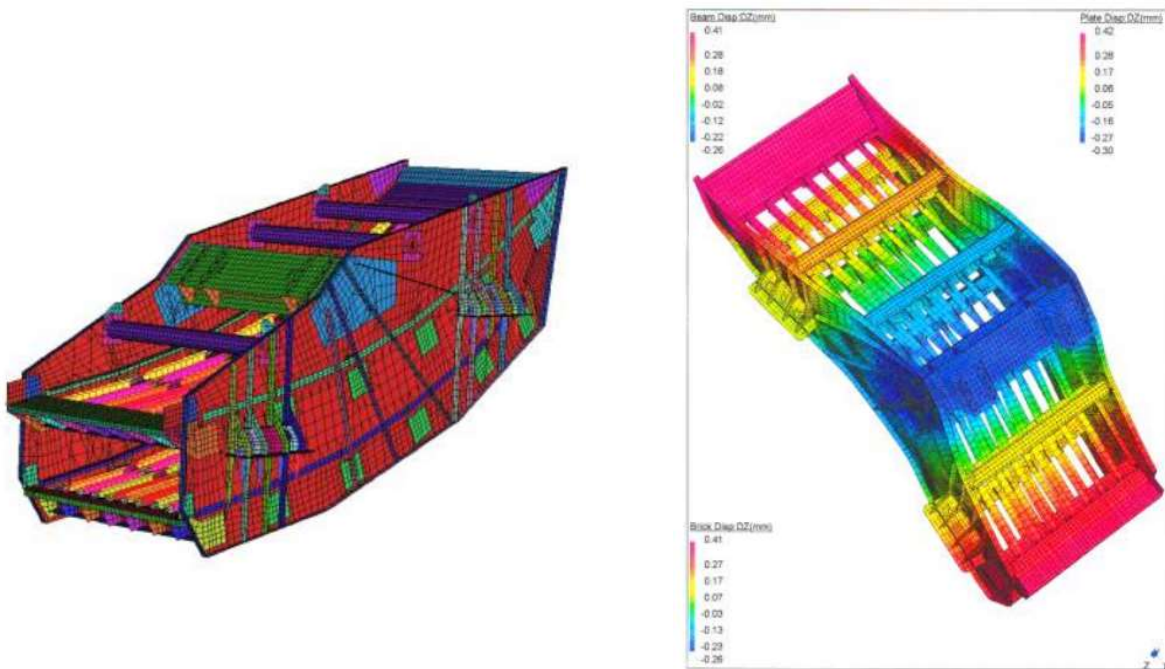
Idler design analysis and structural capacity reviews for high throughput (14,500 tph) conveyors

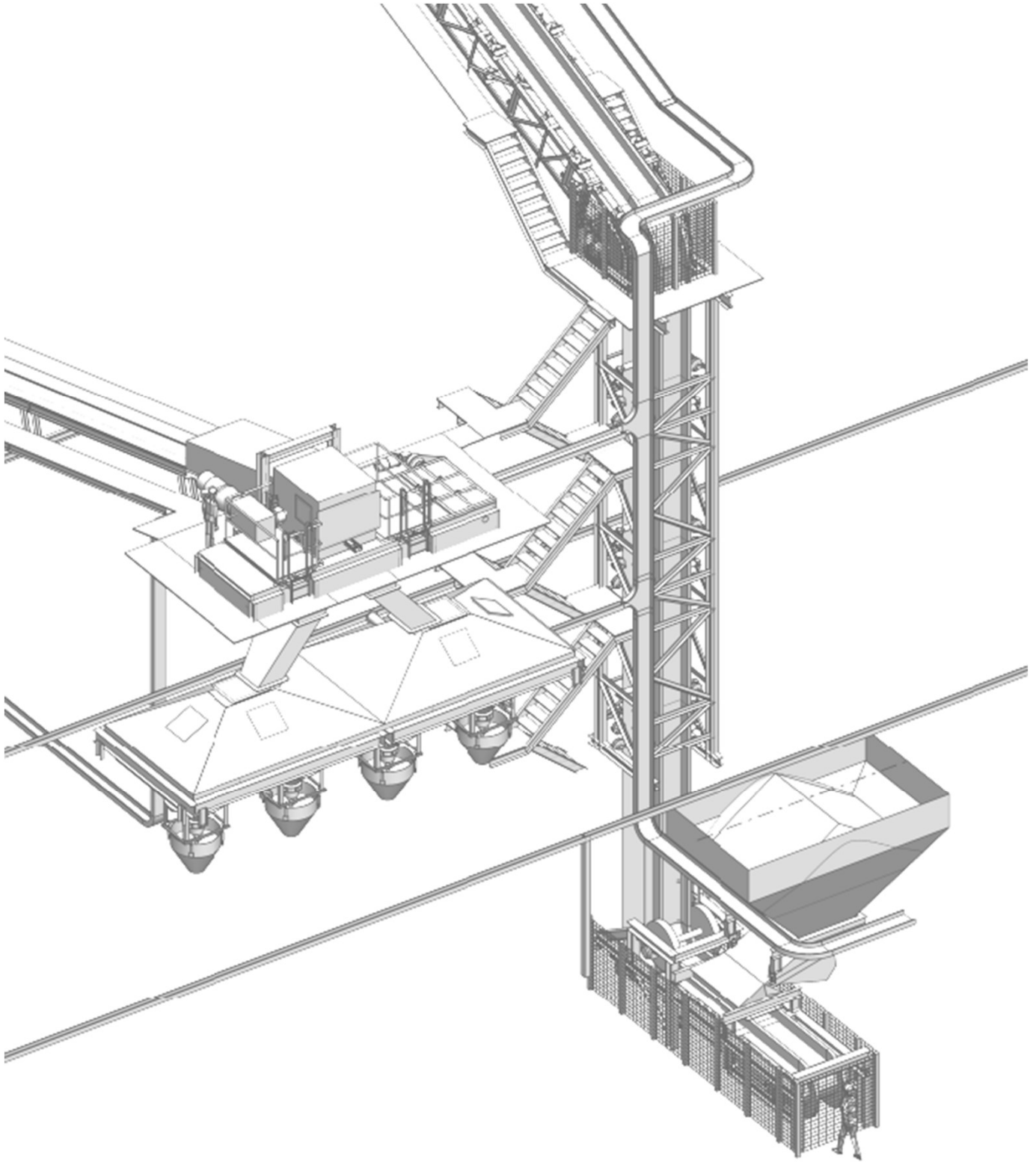


Complete redesign and fatigue analysis of Trommel screen for solid waste management plant



Condition audits, FEA and correlations, fatigue analysis, joint detailing and improvement suggestions for double deck screen





Conceptual CAD model of SRT Bulk Facility

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