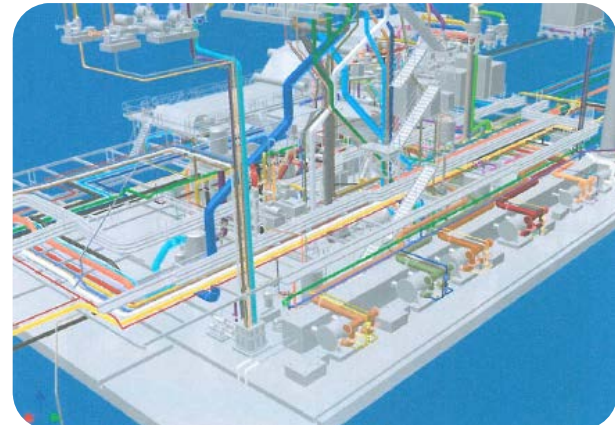
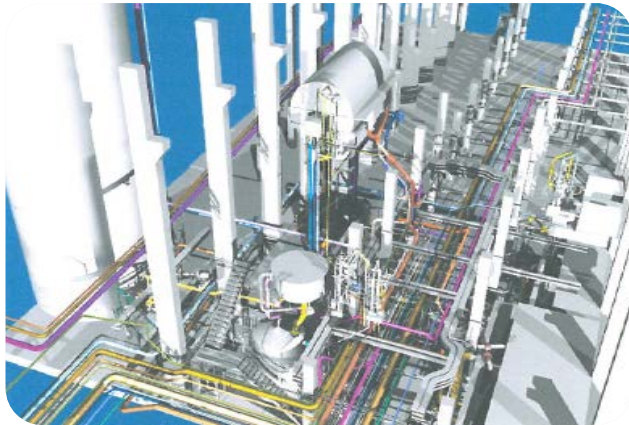


erma elan engineering

COMPANY PRESENTATION



www.ermaelan.com

Who we are, what we offer

SERVICE SUPPLIER OF PROJECT-TECHNOLOGICAL WORKS

- Czech-Swiss company located in Prague
- experience in creating project documentation since 1980
- office dealing with design, consulting and advisory activities, including project management for investment development in the paper industry
- we process your complete project documentation for your investment
- we cooperate with subcontractors, we join tenders and process the purchase contract, we will inspect the equipment before the shipment to you
- we provide installation supervision, our engineers, technicians and construction designers can be trusted with processing of project documentation, as well as tasks in the construction and installation and commissioning
- we process your budget and timetable for the action, we carry out supervision over its implementation
- we have exclusive cooperation agreements with many independent engineers, engineering offices, assembly companies in the Czech Republic, Switzerland, and other European countries
- we have reference orders in the Western Europe, Russia, United Arab Emirates, Pakistan, India, and other countries
- we are a member of the PPM Alliance

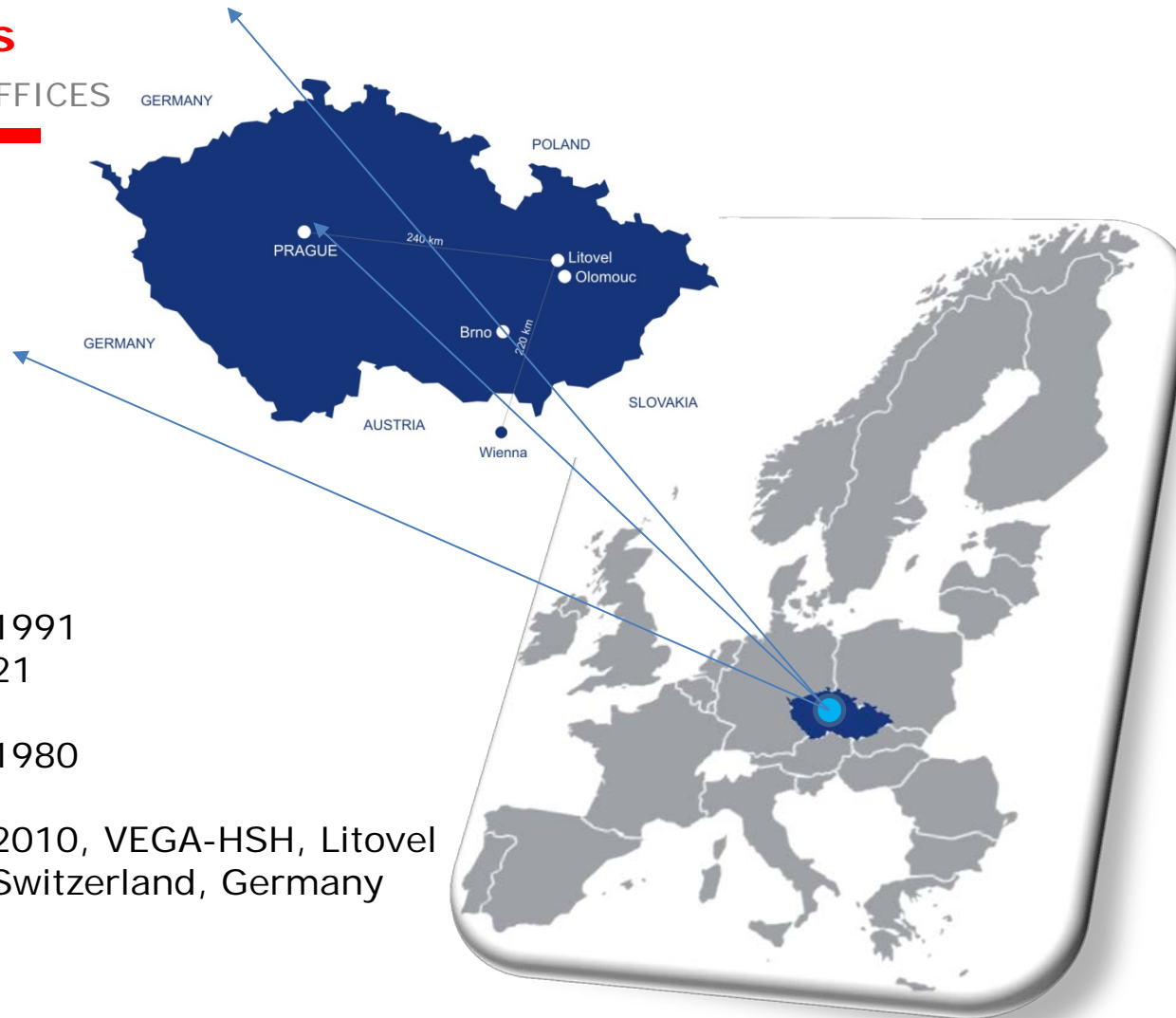
Where you can find us

INTERNATIONAL NETWORK OF OFFICES

Business centrum Zalesi
Pod Visnovkou 1661/33
140 00 Prague 4
Czech Republic
Tel.: +420 234 03 5231
Fax: +420 234 03 5223
info@ermaelan.com
www.ermaelan.com

Year of establishment: 1991
Number of employees: 21
Joinning erma elan
engineering ag (Switzerland) 1980

Entry of foreign investor: 2010, VEGA-HSH, Litovel
Offices abroad: Switzerland, Germany



We offer

01. FEASIBILITY STUDY

- evaluation of the current situation of the investment plan, proposals for further business development
- creating a business plan for a new investment plan
- assessment of the project profitability
- evaluation of all inputs and outputs of the project
- calculation of costs and consumption of energy input - water, gas, steam, etc..
- calculation of the total economic return on investment
- creation of complete documentation to provide export credit or other form of project financing
- long-term cooperation with the Czech Export Bank, Prague and Export EGAP Insurance Company – projects financing by export credits

We offer

02. ENGINEERING

A. PRE-ENGINEERING

- designing the key equipment and their description
- measurement and regulation philosophy
- effects on the environment

B. BASIC ENGINEERING

- technology description including a technological scheme of the process production
- the balance of energy and water consumption
- location of the equipment and pipelines in the construction (layout)
- list of equipment, pumps and motors

C. DETAILED ENGINEERING

- complete list of equipment
- list and drawings of all piping and branch pipes
- isometric piping
- foundations flow sheet of machine
- other documents for equipment supplier

D. AUTHOR'S SUPERVISION

- supervision of the designer in the implementation of investment

We offer

03. PROCUREMENT OF SUPPLIES

A. SECOND-HAND TECHNOLOGY

- connection to the PIDA Association
- services related with searching a suitable second-hand equipment for a specific project
- participation in dismantling, aiming works, etc.
- coordination of works in technical drawings process, etc.
- cooperation with the Czech company CELPAP Prague and PAPCEL Co.

B. NEW TECHNOLOGY

- cooperation with producers of new technologies focused on the paper industry
- cooperation with PAPCEL, a.s. Litovel, CZ
- connection producer + project office = complete solution for your key reconstruction
- joint supervision of implementation and termination of the project
- collaborative network of subcontractors
- cooperation in the selection and contract management, cost control

C. PAPCEL, a.s., CZ

- more than 60 years of experience in supplying machinery www.papcel.cz
- complete machinery technology
- complete engineering service

We offer

04. PROJECT MANAGEMENT - EPC

E - ENGINEERING – project documentation processing

P - PROCUREMENT – the supply of technology provision and other equipment of investment

- a) second-hand
- b) new machine

C - CONSTRUCTION – coordination with suppliers of building works and construction projects

- implementation of investment project
- cash-flow management and cost control
- commissioning of investment

Customer's references

MIDDLE EUROPE:

- PAPCEL, a.s., Czech Republic
- Krkonosske papirny, CZ
- Dentas Kagit ve Sanayi, Turkey
- Akasan, Turkey

EASTERN EUROPE:

- OOO MAYAK-Technocell, Russia
- OOO Mayak-Vega, Russia
- Nikol-Pack, Russia
- Turinskiy CBK, Russia
- Bumazhnaya Fabrika Krasnaya Zvezda, Belorussia
- Dobruskaya Bumazhnaya Fabrika, Belorussia
- Stupinskiy Kartonno-Poligraphiceskiy Kombinat, Russia

- Dagestan Stekllo Tara, Russia
- Suchonskiy CBK, Russia
- OAO Tuymazinskiy CBK, Russia

WESTERN EUROPE:

- Bellmer GmbH & Co KG, Germany
- Over Meccanica S.p.A., Italy
- ALLIMAND S.A., France
- PAMA Papiermaschinen GmbH, Germany
- VOITH GmbH, Austria

OTHER COUNTRIES:

- PACKAGES LIMITED, Pakistan
- BILT BGPPL Ballarpur, India



Cooperation erma elan engineering / PAPCEL

OEM COOPERATION

- connection producer + engineer's office = complete solution for your key reconstruction
- the joint supervision of implementation and termination of the projects
- collaborative network of subcontractors
- PAPCEL - more than 60 years of experience in supplying machinery www.papcel.cz
- complete engineering services



... complete service for the paper industry ...

We are the member of PPM Alliance

ppm ALLIANCE
paper packaging media - Consulting Network

erma
group

erma elan engineering, ltd.
CZ - Prague

Poradenství a
projektové práce

- Technologické procesy
- Řízení projektů
- Projektové práce
- Detailní projektování
- Dozor při výstavbě
- Stavební projektové práce
- Projektové práce elektro



Paper Technology Consulting AG

PTC Paper Technology
Consulting AG
D-Bietigheim-Bissingen

Technologie a Know-how na:

- Zpracování sběrového papíru
- Optimalizace technologie a kvality
- Vývoj výrobků
- Laboratorní analýzy
- Řízení vodního hospodářství
- Úpravy vodních okruhů
- Čistění odpadních vod



Paper Expert Pool

PEP
Paper Expert Pool AG
CH-Greifensee

Krátkodobé expertní
služby

- Řízení projektu
- Optimalizace výrobního závodu
- Optimalizace procesů
- Transfer Know-how
- Dočasný management



Bogner Gottschalk und Heine
D-Starnberg

Vyhledávání vedoucích pracovníků

- Požadavky na pracovníky
- Nábor pracovníků
- Vývoj pracovních sil
- Převodění na jiné zaměstnání
- Změna podnikatelské činnosti

- collective solution for your investment
- mechanical technology + services + paper technology + management + human resources

... complete service for the paper industry ...

Selected references

SATISFIED CUSTOMER

Packages Limited, Pakistan

Greenfield wood-free Recycling Printing Paper (PM 4.5 m working width)



Services **erma**

Basic Engineering Study

- Evaluation of used equipment from Zwingen
- Recommendation for new equipment

Detailed Engineering

- P&ID Flowsheets
- Layout
- Foundation drawings
- Piping drawings
- Piping Isometrics
- Tank drawings

Electrical / Process Control

- Process Description
- Power distribution spec.
- MCC
- I/O Lists
- Specification DCS
- Hook-up drawings
- Specification

Project Highlights

- ☛ State of art deinking process
- ☛ Integration of used and new equipment
- ☛ Including Deinking Plant 200 tato

Start-up: 2008

Selected references

SATISFIED CUSTOMER

Kartogroup Deutschland GmbH, Germany

Greenfield Tissue Machine 60'000 tpy (5.4 m working width)



Project Highlights

- ☞ TM without basement
- ☞ State of art converting equipment
- ☞ Good co-ordination with local authorities
- ☞ High quality of jumbo rolls and converted products

Start-up: December, 2004

Services **erma**

The services in co-operation with bhm, Rankweil (A), and H Rahm Engineering, Männedorf (CH).

Engineering Study

- Evaluation of main equipment suppliers
- Complete permitting support for BImSchG

Project Support Services

- Project management assistance
- Engineering manager
- Process engineering
- Purchasing assistance – auxiliary equipment
- Civil engineering by bhm
- Detailed engineering infrastructure

Detailed Engineering

- Foundation drawings
- Piping drawings
- Piping isometrics
- Tank drawings
- Steelwork drawings

Erection Supervision

Selected references

SATISFIED CUSTOMER

Abu-Dhabi, United Arab Emirates

Greenfield Tissue Machine 22'000 tpy (2.7 m working width)



Project Highlights

- ☞ TM without basement
- ☞ State of art converting equipment
- ☞ High quality of jumbo rolls and converted products

Services **erma**

The services in co-operation with
Over Meccanica, Italy

Engineering Study

- Evaluation of main equipment suppliers
- Complete permitting support for BImSchG

Project Support Services

- Project management assistance
- Engineering manager
- Process engineering
- Purchasing assistance – auxiliary equipment
- Civil engineering by bhm
- Detailed engineering infrastructure

Detailed Engineering

- Foundation drawings
- Piping drawings
- Piping isometrics
- Tank drawings
- Steelwork drawings

Erection Supervision

Start-up: December, 2000

Selected references

SATISFIED CUSTOMER

ООО «Mayak-Technocell», Penza, Russia

Detail engineering work for a new PM from Papcel company for production of decorative sorts of paper with output of 45 000 tpy



Project Highlights

- ☞ PM with basement for production of decorative sorts of paper
- ☞ PM and stock preparation department from PAPCEL company, approach system from VOITH company

Start-up: March, 2009

Services **erma**

The services in co-operation with Voith (Germany), Papcel (CZ), Lang-Hafner (Germany), Felix Schoeller (Germany), OrgBumProject (Ukraine)

Engineering Study

- Conception of disposition (lay-out) of technological equipment in new halls

Project Support Services

- Project management assistance
- Engineering manager
- Process engineering
- Civil engineering by OrgBumProject
- Detailed engineering infrastructure

Detailed Engineering

- Layout drawings
- Foundation drawings
- Piping drawings
- Finalisation of steam and condensate system
- Tank drawings
- Steelwork drawings

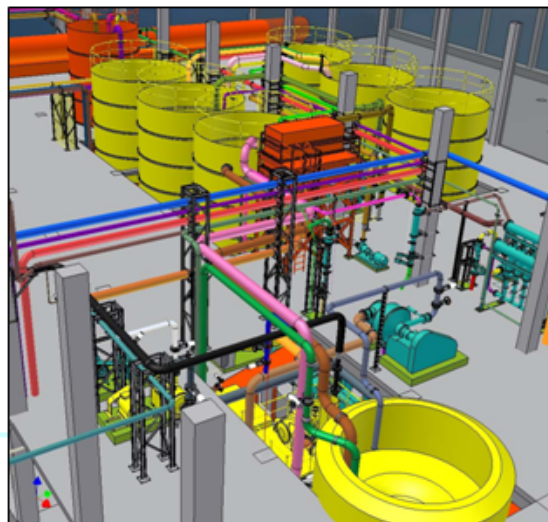
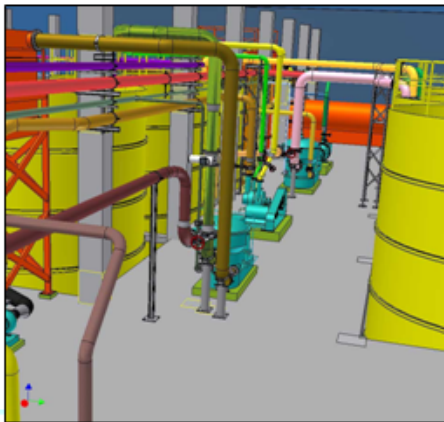
Erection Supervision

Selected references

SATISFIED CUSTOMER

ООО «Karton & Upakovka», Ucaly, Russia

Reconstruction of existing PM for production liners (flat boards) and corrugated medium (fluting) with output of 100 000 tpy



Project Highlights

- ☞ Reconstruction of PM including a new second wire
- ☞ New complete stock preparation department for two wires
- ☞ Change of the primary circuit into a new system
- ☞ Vacuum system completed with new pumps

Start-up: 2010

Services **erma**

The services in co-operation with Papcel (CZ), Kadant Johnson (Italy), Resmel (Finland), IFM (CZ)

Engineering Study

- Conception of disposition (lay-out) of technological equipment in existing area

Project Support Services

- Project management assistance
- Engineering manager
- Process engineering
- Detailed engineering infrastructure

Detailed Engineering

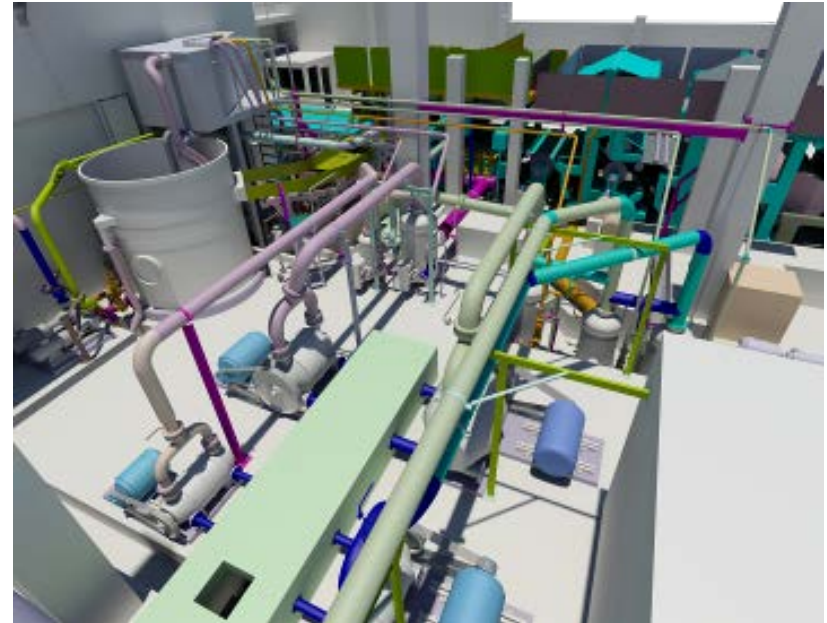
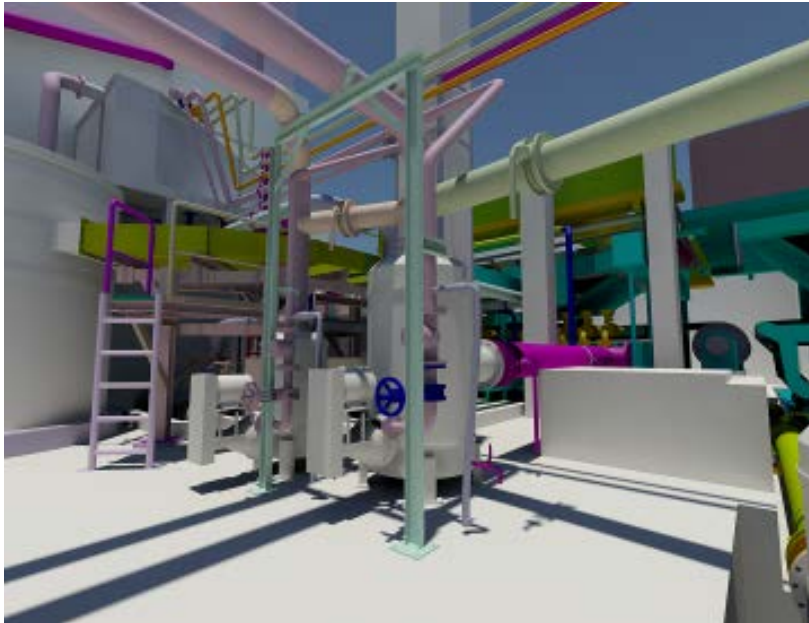
- Layout drawings
- Foundation drawings
- Piping drawings from 3D
- Tank drawings
- Steelwork drawings

Selected references

SATISFIED CUSTOMER

2012: OAO Bumazhnaya fabrika «Krasnaya Zvezda», Chashniki, Belorussia

Reconstruction of the PM line for the fluting and liner processing, paper substance 80 - 220 g/m²

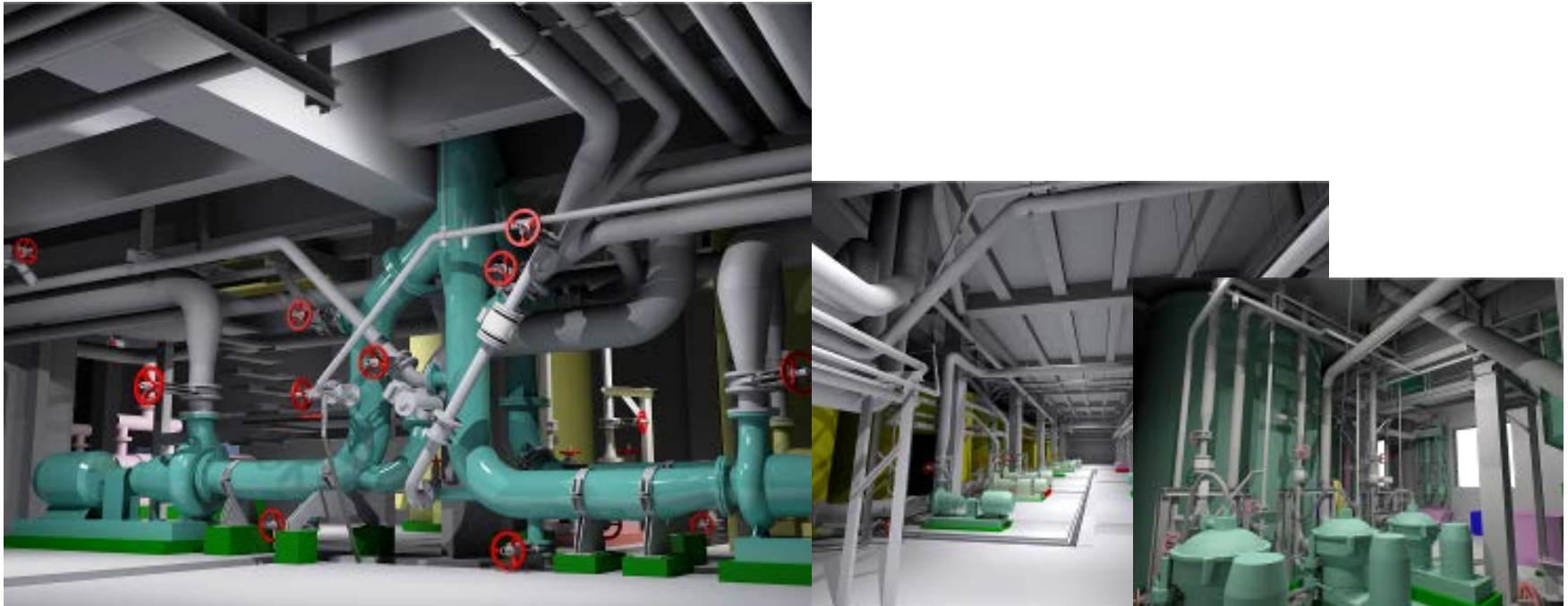


Selected references

SATISFIED CUSTOMER

2012 - OAO Dobrushkaya Bumazhnaya Fabrika «Geroy Truda», Dobrush, Belorussia

Reconstruction of the PM 7 line for the two-layers fluting and liner processing,
paper substance 55 - 230 g/m²



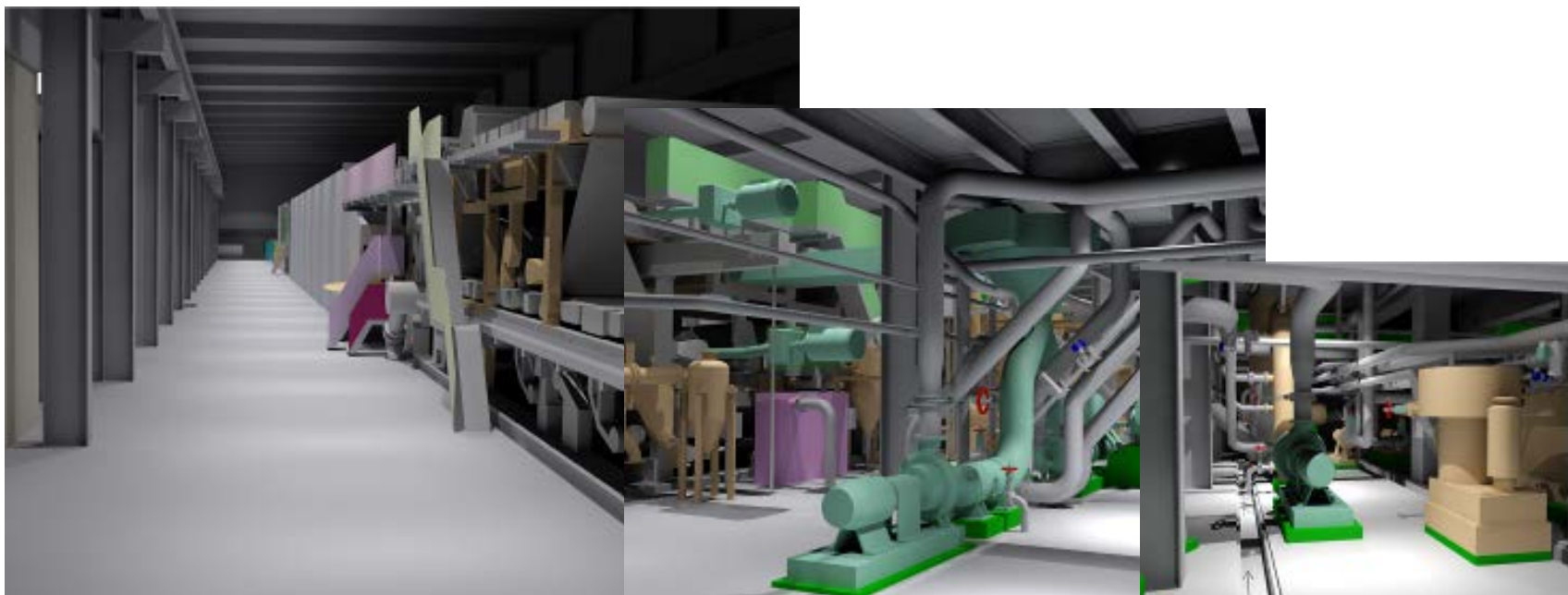
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Selected references

SATISFIED CUSTOMER

2011 - 2012: OOO Mayak-Vega, Penza, Russia

Modernization of the s/h PM line from Italy, completion, new top wire, fluting and liner processing, new SPL line for two layers, PM output 76.000 tpy

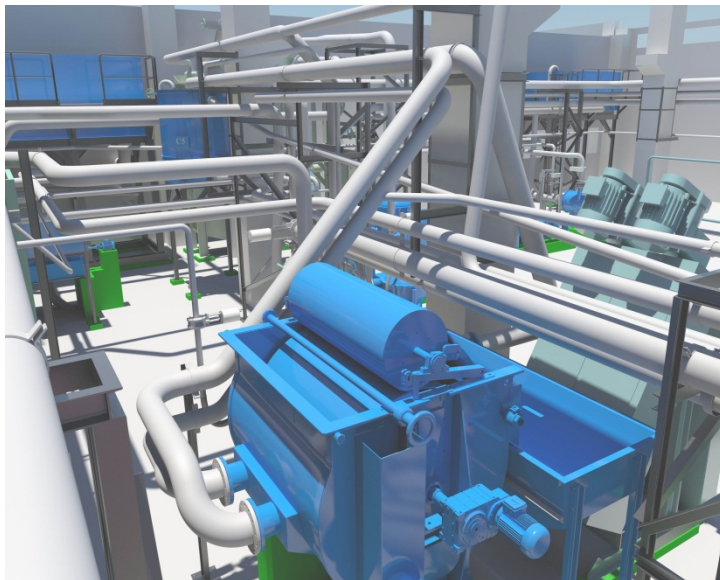


Selected references

SATISFIED CUSTOMER

2012 - Dentas Kagit ve Sanayi, Turkey

Project documentation processing for two SPL lines - 270 and 70 tpd

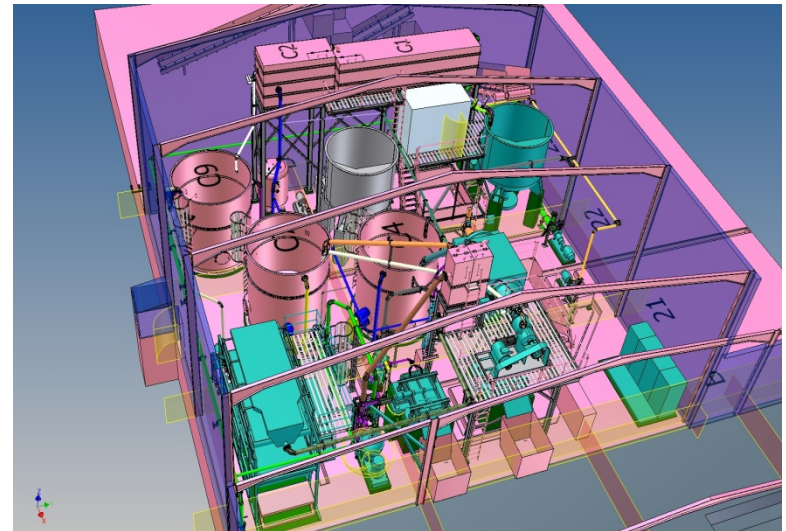


Selected references

SATISFIED CUSTOMER

2012 - Tetra Pak, Beograd, Serbia

New SPL line for wet-strength papers processing, output line 15 - 20 t/day



Selected references

SATISFIED CUSTOMER

2012 - AKASAN ADANA Kagit Sanayi, Turkey

PM reconstruction, fluting and liner production, PM output increasing up to 150 t/day



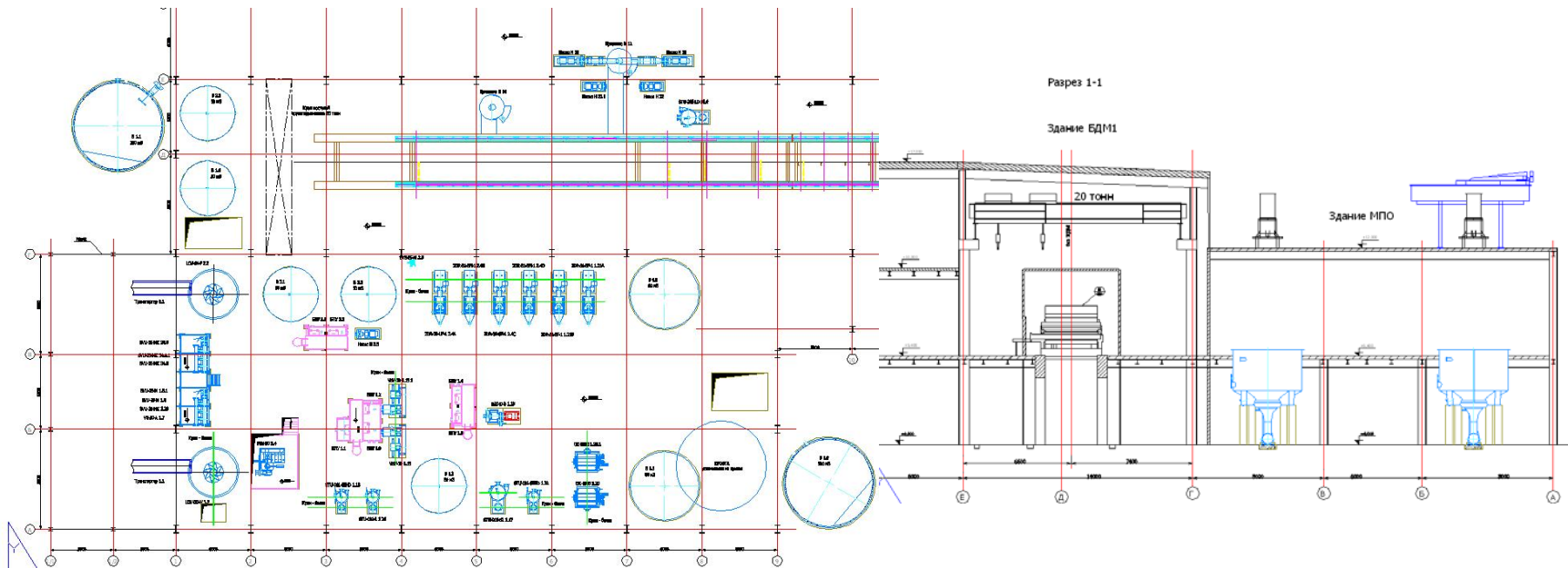
... complete service for the paper industry ...

Selected references

SATISFIED CUSTOMER

2012 - ООО Dagestan Steklo Tara, Dagestan, Russia

Technological concept of the new PM and SPL line for the fluting and liner processing

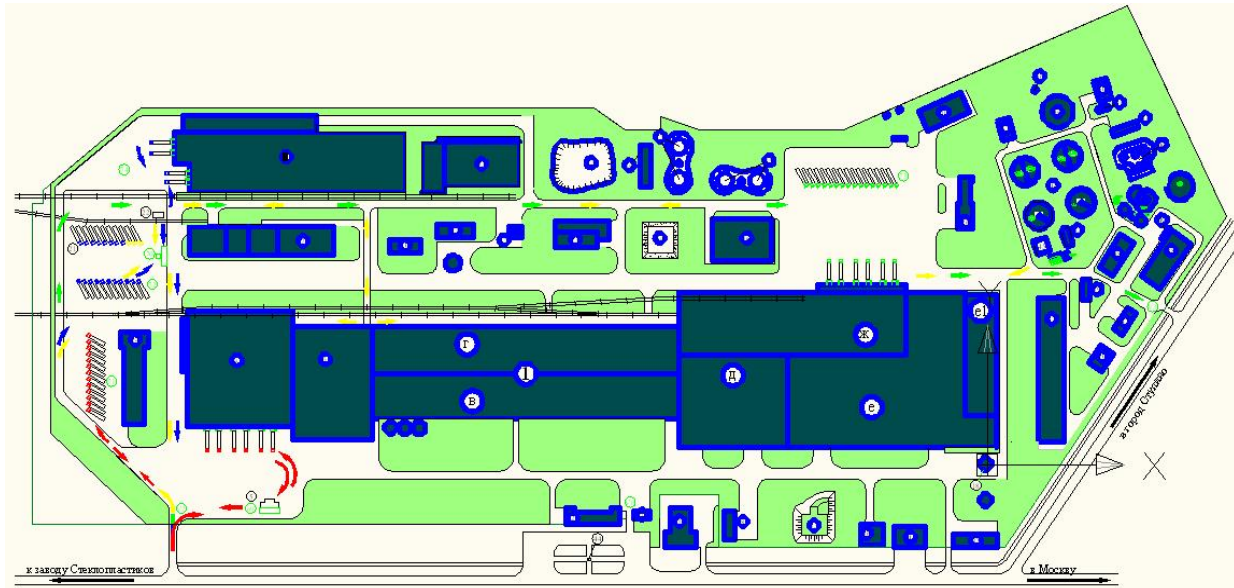


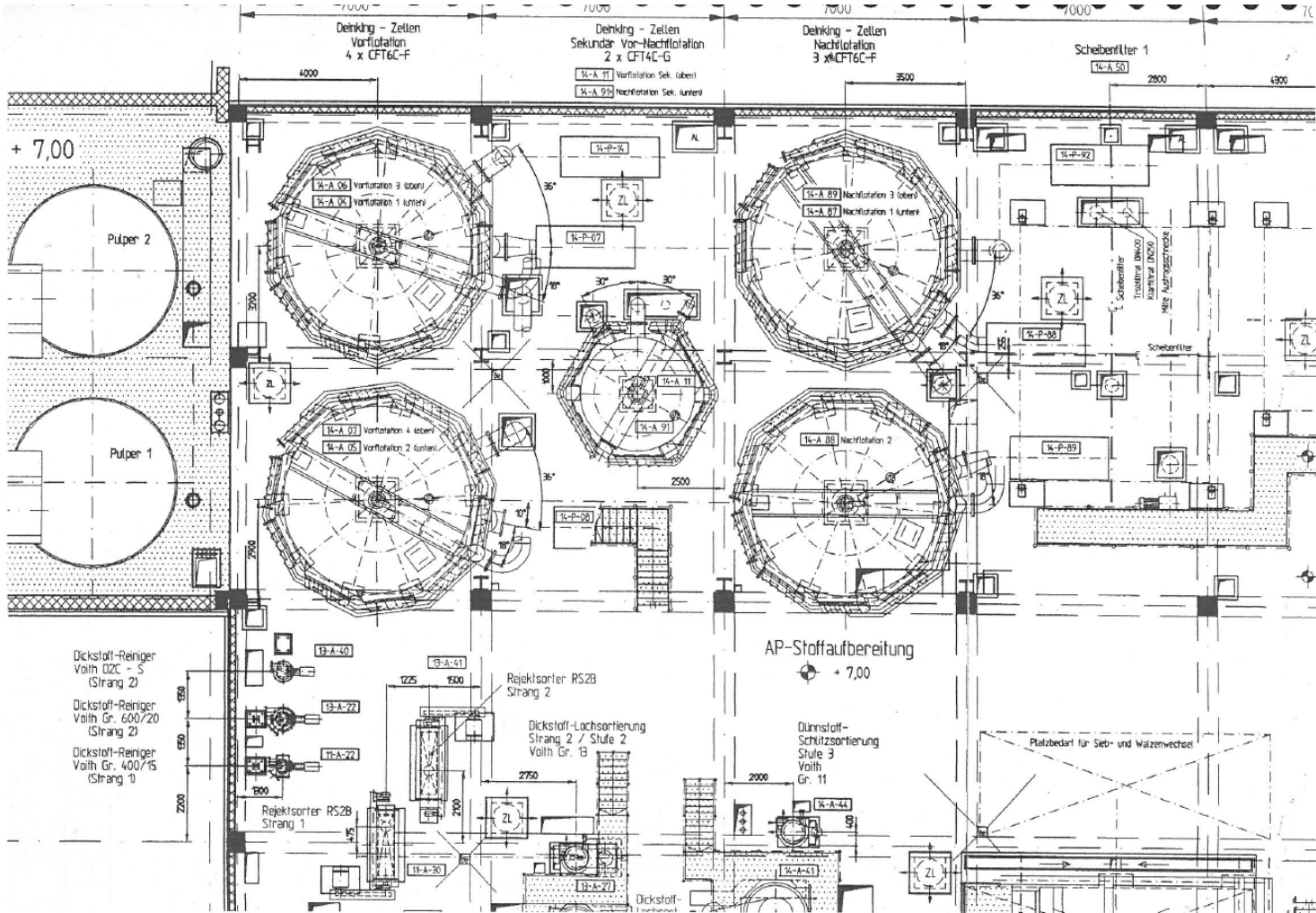
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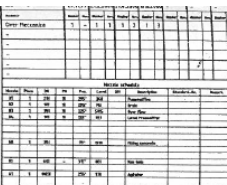
SATISFIED CUSTOMER

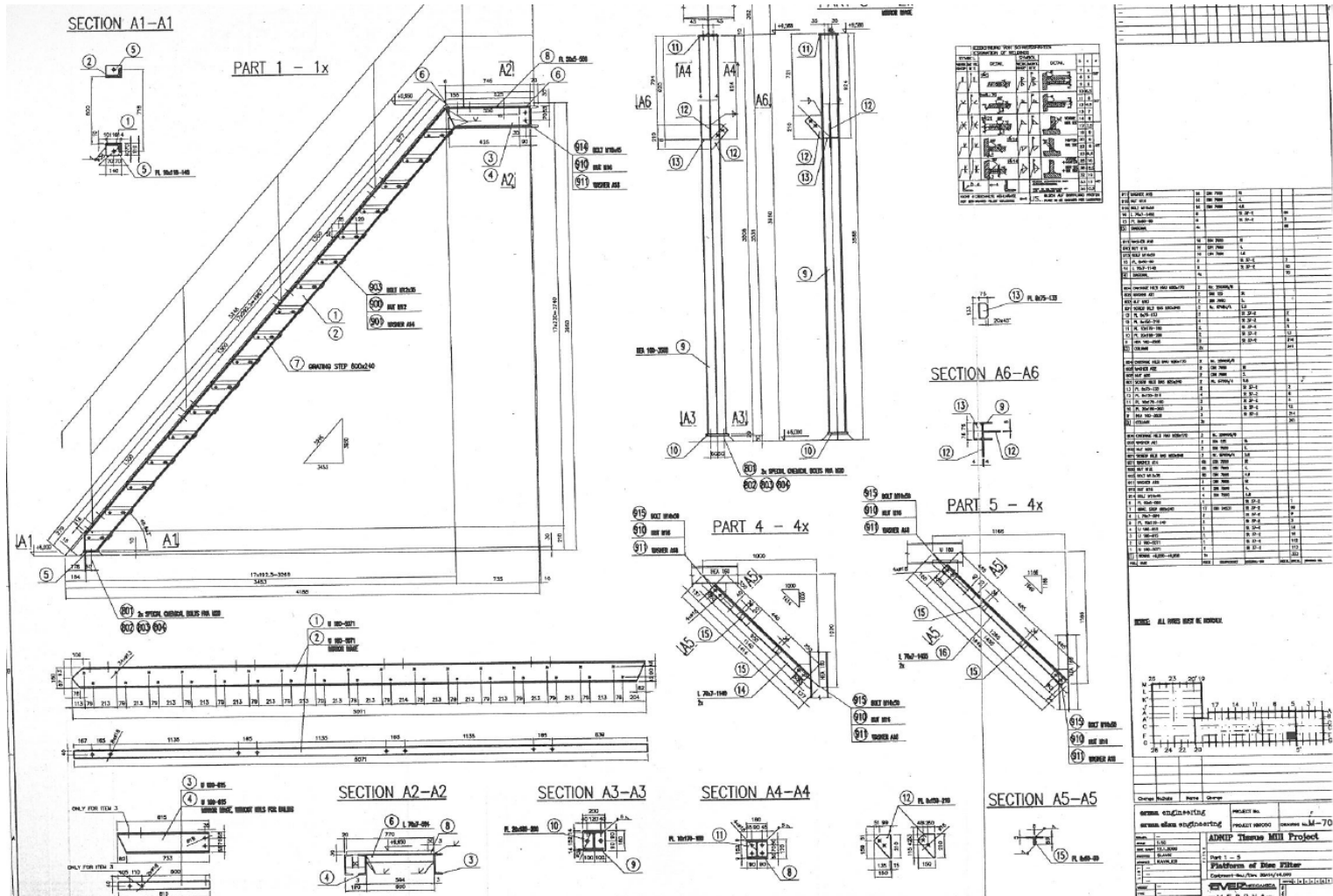
2011 - OOO Stupinskiy Kartonno-Poligraphiceskiy Kombinat, Stupino, Russia

Technological audit of 2 PM lines, fluting and liner processing.



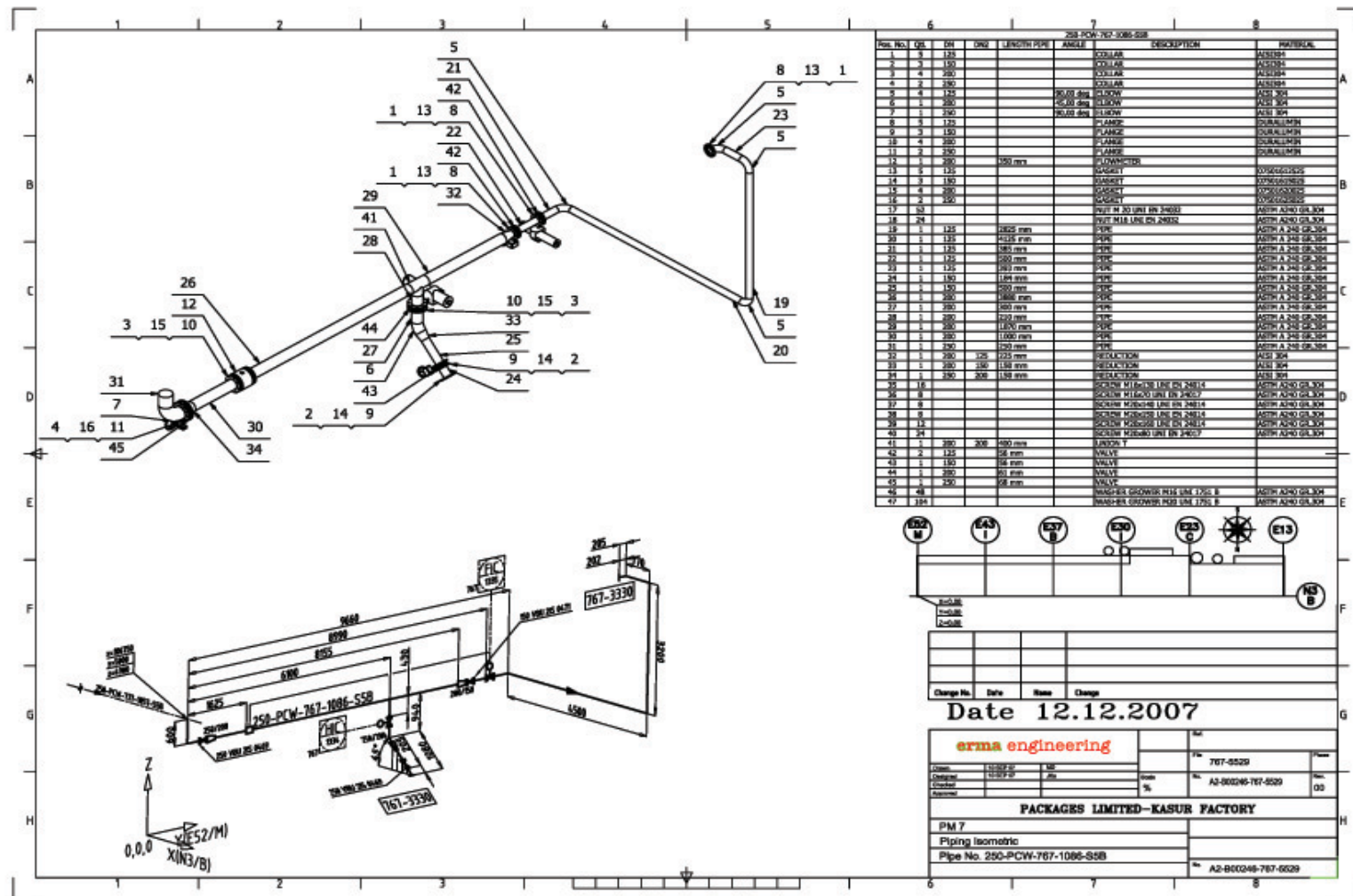


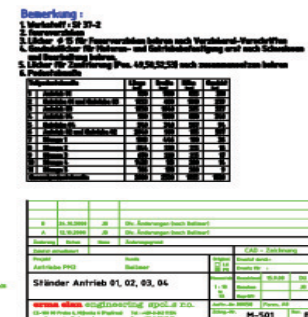


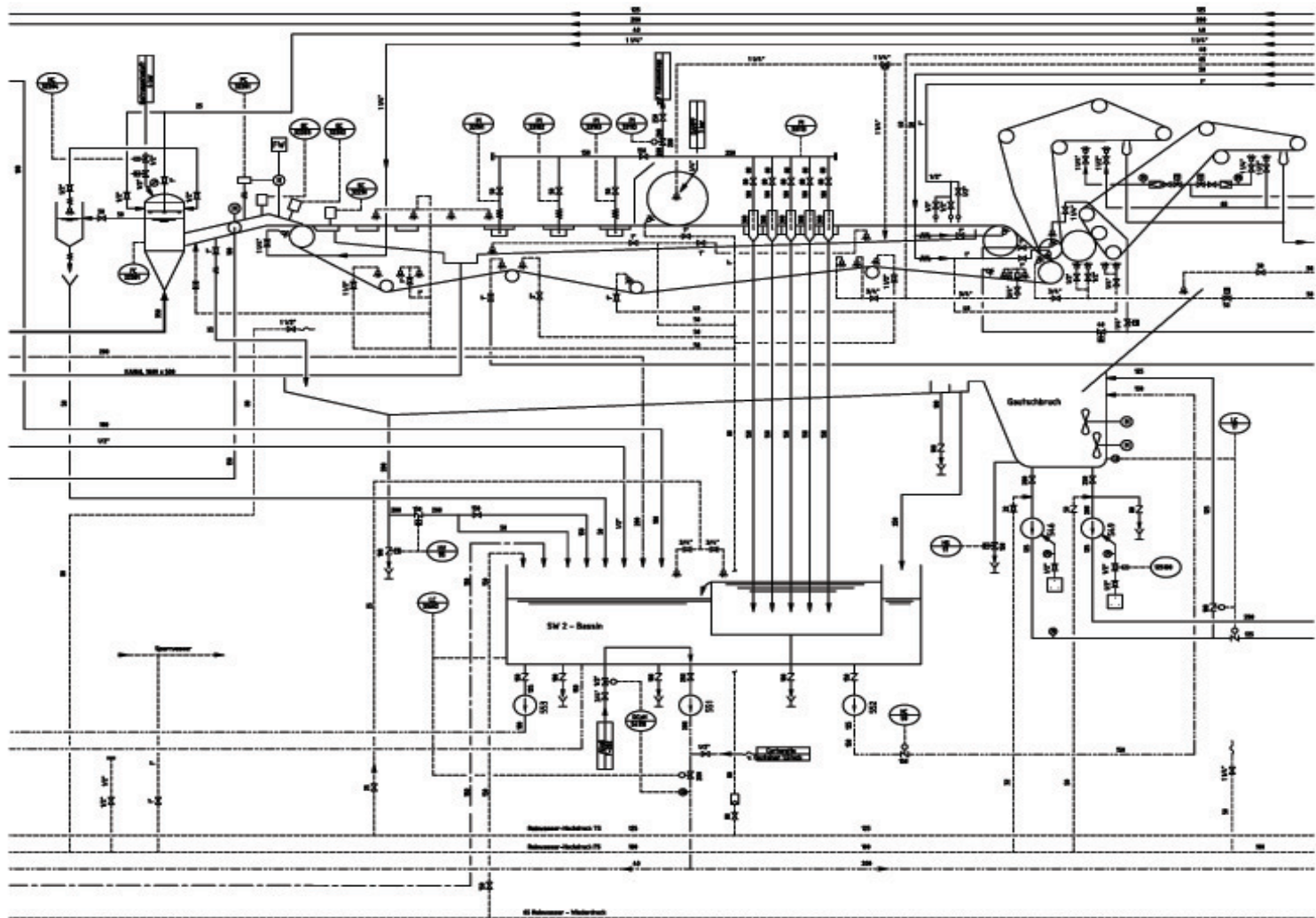








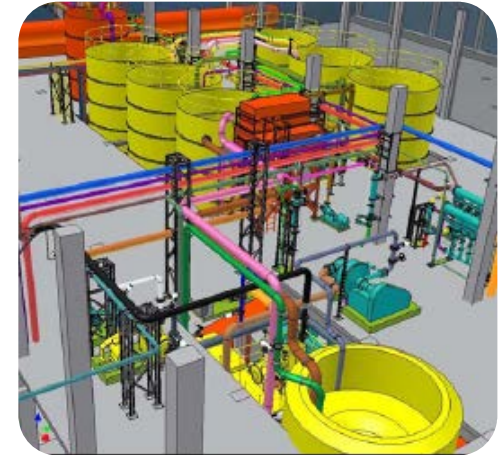




Summary

We offer

- creation „feasibility study“
- engineering– engineering calculations, the layout of machines, foundations flow sheet and piping flow sheet, etc. (pre-, basic, detail engineering)
- project documentation provision and supply provision - tender cooperation
- project management



Priorities

- reduction of operating costs for the customer
- expert and professional approach to the customers
- budget maintenance of project investments
- timetable keeping
- documentation in a language of the customer

Summary

Thank you for your attention.

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