

Re-Engineering of a 200 m³pd Ethanol Plant

Project engineer at Frings-Austria

Customer: Biohim, (KAZ)

Tajynsha, Kazakhstan, 2005/2006

- Recalculation of MTO and budgets for: milling, gluten plant, biotechnology, distillation, stillage evaporation and drying, cooling, CIP, ultrafiltration (UF) and RO.
- Start up of UF and RO.
- Reference visits with customers.

**Dr. Werner
Koschuh**
Reference 1

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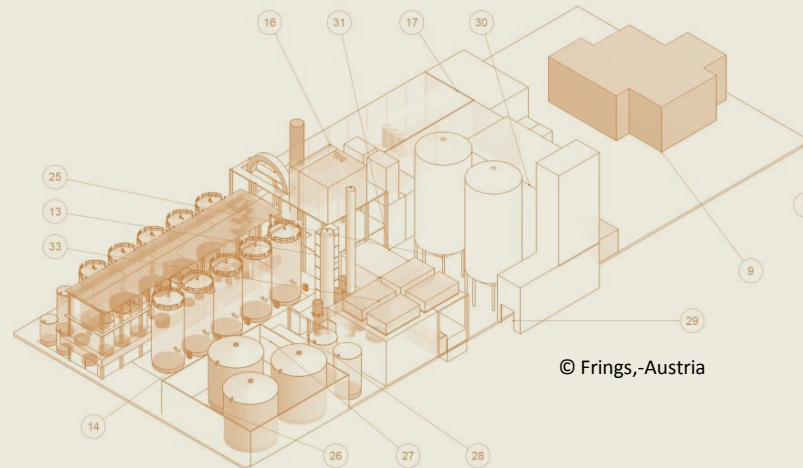
Personal development: handling of a big turn key project from first concept to purchasing, erection and start up

Conceptual Design and Permit Engineering

Project engineer at Frings-Austria
Customer: 4biofuel/4energyinvest (B)
2007, Brussel-Harbour

- Ethanol and vital-gluten, 600 t wheat per day.
Process design for milling, biotechnology, distillation and utilities.
- Starting with case studies and technology studies in the beginning of the project, ending with process design on PFD-level and green field budget calculation.
- Offer for the green field plant.

**Dr. Werner
Koschuh**
Reference 2



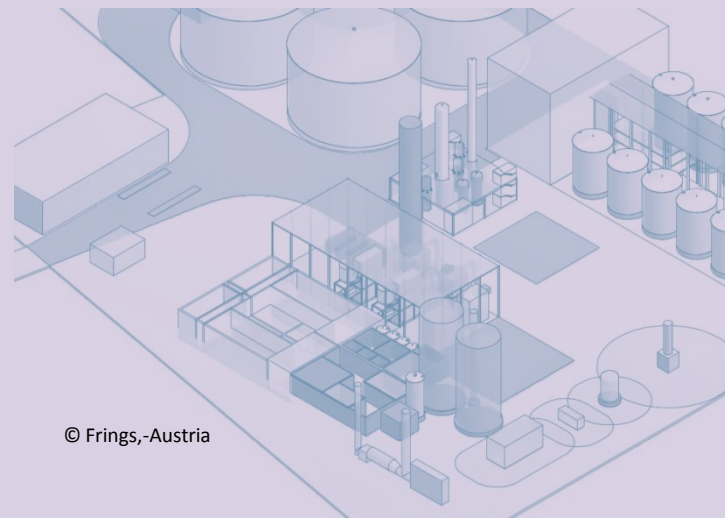
Personal development: developing a project from the beginning in cooperation with investors and an architect team

Developing of a 1¹/₂ Gen Ethanol Plant

Project engineer at Frings-Austria
Customer: Internal / Europamil CRO
2007, location: Vukovar, Croatia

- Conceptual design of a plant in which all side stream are utilized as energy.
- Pilot test of separation, biogas for thin stillage (IC-reactor) and whole stillage (conventional), biomass combustion of wet DDG with wood and/or rape seed cake
- Preparing an offer for the green field plant (900t corn pd).

**Dr. Werner
Koschuh**
Reference 3



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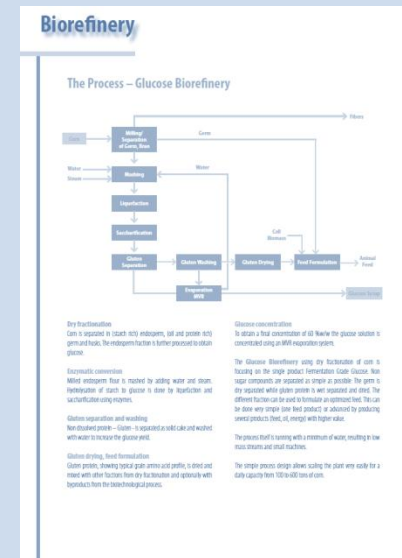
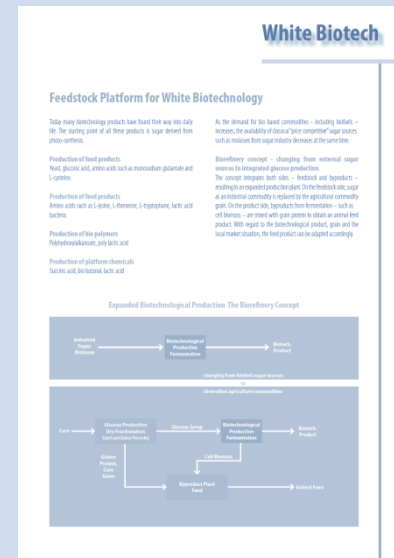
Personal development: deep insight into biomass cogeneration and actual anaerobe waste water technology; experience in doing pilot test in m³ scale

Development of a Process Design Package for an Alternative Glucose Production Process

Project engineer at Frings-Austria / Desmet Ballestra Ethanol
 Customer: BASF
 2006-2011, Gunsan (South Korea)/D/A

- Comparison of milling technologies.
- Pilot test for enzymatic hydrolysis and decantation.
- Basic engineering in cooperation with the BASF team.
- Definition of licensee packages.

**Dr. Werner
 Koschuh**
 Reference 4

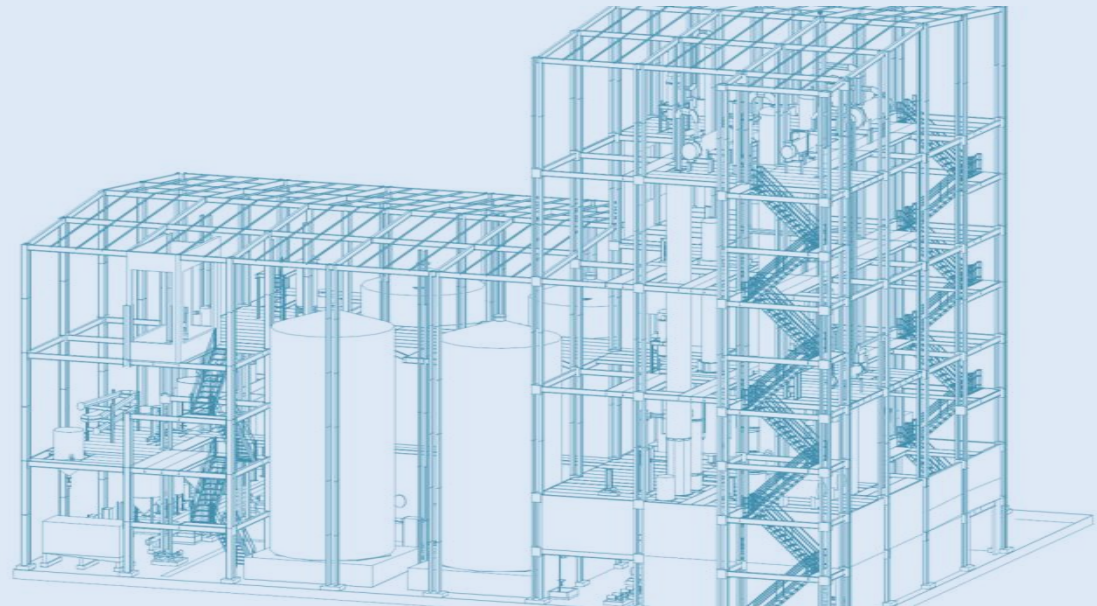


Personal development: learning BASF standards, deep insight in corn milling technology

Basic Engineering of a Ethanol Plant based on Molasses

Head of Technology, Desmet Ballestra Ethanol
Customer: Hitech Engineering Corporation India Pvt. Ltd.
2010, Baramati, Dist. Pune, Maharashtra, India

- Basic Engineering (mass balance, PFD, PID, equipment DS) for fermentation and distillation.
- Coordination between center of excellence (Desmet Ballestra, Graz) and equipment design at Desmet Ballestra India .



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Personal development: leading a multi culture engineer team and coordinating know how transfer to a partner (sister company), "Seeing the Indian style"

**Dr. Werner
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Reference 5

Personal References of Dr. Werner Koschuh



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Personal Data

Full Name:

Werner Josef KOSCHUH

Nationality:

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Date of Birth:

1. Dec.1971 in Wagna/Styria

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Family:

engaged, 2 children (born 6.11. 2007)