



Jacobi & Partner Industrieberatung GmbH

Selected References

In the following J&P presents a selection of references executed during the past 5 years. The references are from projects which either were contracted to J&P directly or were carried out by the core team members of J&P.

The references displayed below do not represent the entire J&P track record and do contain only brief information. If more details are requested, please do not hesitate to contact us directly under mining@jacobi-partner.de

Litigation Support: Expertise on Binderless Briquette Plant Tabang TCUP KSC Project, Indonesia

Client: Bayan Group

Jacobi & Partner Industrieberatung GmbH (“JuP”) was assigned as expert witness to support its Client Bayan Group, Singapore, via Davinder Lawyers (“BAYAN”), to determine the technical circumstances that caused the failure of the Tabang Mine Coal Upgrade Project based on the construction and operation of a coal briquetting plant, using the innovative, patented technology called “Binderless Coal Briquetting”, The issue was subject to a legal dispute at the **International Commercial Court at Singapore** to reject a 90m\$ claim of a former Bayan JV Partner. Beside a technical expertise the services contained an analyses of the capex involved, which showed budget overruns of >300% compared to original estimates. With the support of J&P the Court finally rejected the JV partners claim.

Specialist Services: Production of Concentrate from Bulk Samples of 7 u/g hard coal mines of AcelorMittal Temirtau; Kazakhstan for the Determination of Coking Properties at AM Research & Test Centre in France

Client: AcelorMittal Temirtau

Jacobi & Partner Industrieberatung GmbH (J&P) was assigned by AcelorMittal Temirtau Coal Division (AMT) to carry out programme to produce concentrates from coal samples of the AMT u/g mines in Kazakhstan. The concentrates with a min mass of 1500 kg should be used in the AM research and test facilities in France for the determination of coking properties to support the mid and long term mine planning of the company.



The physical testwork and analytics for these samples was executed by a subcontracted laboratory under the supervision of J&P. A total of 19 samples have been shipped to Germany.

From each sample with approx. 3 tonnes raw coal, MBE-CMT has to produced approx. 50% - 1,5 tonnes clean coal with 9-10A%. The Client required to produce a concentrate with a similar process as applied in the CPP operations in Kazakhstan J&P achieved this by choosing a treatment of the ROM samples by jigging and flotation works.

Engineering: Basic Design for a coking coal beneficiation plant of Uvalnaya, Kuzbass, Russia for 5 mtpy

Client: Confidential

The Coal Prep Team of J&P was assigned to carry out a basic design for the construction of a CPP for Premium Coking Coal with an annual ROM capacity of 5 mtpy. A process guarantee was given by the engineer and finally successfully achieved. The plant was successfully commissioned in 2019 and is now in operation with good success and opex as low as 2 \$/t.

- J&P Team designed the process, based on test work of bulk samples from u/g channel samples
- simulated various technological schemes
- prepared trade off studies for the selection of the optimum processes
- prepared the detailed mass and volume balances
- prepared detailed flow sheet and P&I diagrams
- carried out the mechanical, electrical and structural design for the plant
- prepared the tender documents
- carried out tender analyses
- supported the Client during procurement
- provided construction and commissioning supervision.

Engineering: Basic Design for the expansion of a Uvalnaya CPP by additional 1 mtpy of concentrate, Kuzbass, Russia

Client: Confidential

The Coal Prep Team of J&P was assigned to carry out a basic design for the expansion of the above CPP by another 1 mtpy of concentrate. A process guarantee was given by the engineer complying with GOST Standards. The plant is currently under procurement and commissioning of the expansion will commence soon.



- J&P Team designed the process, based on test work of bulk samples from u/g channel samples
- simulated various technological schemes
- prepared trade off studies for the selection of the optimum processes
- prepared the detailed mass and volume balances
- prepared detailed flow sheet and P&I diagrams
- carried out the mechanical, electrical and structural design for the plant
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- supported the Client during procurement

Specialist Services: Development of a Market Entry Strategy for Chem Mod™ products in the Coal & Lignite based Power Generation Industry in Germany, Poland and Czech Republic

Client: DRA Global

J&P was asked by DRA Global, Canada, which held a licence for the marketing of Chem Mod, an bromate based additive to hard coal and lignite resulting in the reduction of mercury from the flue gas of coal fired power plants. The marketing licence referred among others to South Africa and DRA intended to transfer its knowledge to the European power sector in selected countries in Europe.

J&P has made a comprehensive analysis of the fossil fuel based power generation markets of the countries Germany, Poland and Czech Republic with special emphasis of the opportunities to introduce specific sorbents of Chem Mod™ applied to the hard coal or lignite with the objective to reducing pollutants like mercury in the flue gas.

To support the market entry of the sorbents to the respective markets, laboratory test work was conducted with Stuttgart University, which demonstrated the capability of the respective sorbents to achieve the goals.

Recommendations for further activities were prepared by J&P for the Client's final decision making.



Optimization Study: Development of conceptual design to justify improvement of concentrate yield with use of Karaganda coal at CWP Vostochnaya and WP-2 JSC ArcelorMittal Temirtau

Client: AcelorMittal Temirtau

The minimization of losses in CPPs is a source of increasing income easily to access. At a capacity of 6 mtpy and a coal content ($<1,80 \text{ kg/dm}^3$) assumed to be 50%, each 1% of loss in yield is equivalent to approx. 60,000 tpy of concentrate. In cash terms it is approximately 6,000,000 \$/a assuming revenue of 100 \$/t for coking coal concentrate. Having this in mind the primary task of the assignment was to identifying sources of losses and reasons for underperformance of the respective process.

In order to achieve this target J&P started the services with reviewing the baseline data used for the design of the plant and compare to current situation in order to identify changes in the ROM coal

Based on the design data (we assume that the relevant data e.g. float sink analyses and screen ash analyses are available) J&P prepared a series of computer simulations for the different separation processes in order to define realistic performance figures for such processes. These were compared to the data actually achieved. In case of significant deviations from the original design basis the Consultant will run another series of simulations with updated data.

J&P used a software package developed in-house allowing for highly accurate prediction of separation processes applying realistic performance indicators such as “ecart probable” of “imperfection” values.

Based on the achieved results of the in-deep analysis of the 2 AMT wash plants J&P prepared detailed recommendations for the modernisation of the plants during a implementation period of 2 years.

Due Diligence of an u/g hard coal mine

Client: Krupp Industries

J&P carried out a due diligence exercise for the purchase of a u/g hard coal mine in Poland. The scope comprised of the evaluation of geology and resources/reserves, the basic mine layout, assessment of optimized ROM Coal production, Life of Mine Plans, optimised number of long wall faces, haulage and coal processing.



For further details and our complete track record please contact us at any time using the following address:

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