

Steven Charles Frankland

Qualifications / Affiliations

University of Birmingham at Edgbaston,
Honours Degree in Minerals Engineering,
1972
Fellow of the Minerals Engineering Society
(Past President)
Member of the South African Coal Processing
Society
Member of EU Expert Committee on Coal
Preparation

Nationality

British

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Current Position at CWA

Consultant – Metals & Minerals Department

Specific Expertise and Experience

Steven Frankland is a coal preparation engineer with 45 years worldwide experience in handling, processing, storing and utilising coal.

Summary of Previous Employment

Present

Dargo Associates Ltd.

Director & Consultant Coal Technologist

Projects completed include:

- Evaluation of requirements and design of a coal preparation plant for a coking coal mine in the UK
- Coal Preparation Expert Witness for a legal relating to coal quality in Mongolia
- Preparation of a scoping study for a coal mine reopening in Poland
- Preparation of a coal preparation plant modification in the UK
- Review and recommendations for coal preparation plant in West Virginia, USA
- Assessment of coal supply potential, market pricing and projections for a coal fired power station in Dubai
- Continual assistance on operations and projects to Arcelor Mittal Kazakhstan, conception and designs for installation of hydrosizers, tailings filtration, flotation plant and concentrate dewatering
- Preparation of Pre-feasibility study for a coal washing plant in Poland
- Due diligence for a coal supply to Banten Power Plant in Indonesia
- Preparation of Feasibility Study and implementation of improved fine coal cleaning at two coal preparation plants for Arcelor Mittal, Kazakhstan
- Review of coal preparation plant at Severnaya, Kuzbass Region Russia, for Arcelor Mittal
- Recommendations for improving moisture content of product
- Consultation on coking properties of coal from Severnaya supplied to Kriva Rog steel works
- Review of coal preparation operations of Arcelor Mittal in Kazakhstan. Recommendations for improving facilities
- Valuation of coal mine in Rostov Region Russia.
- Project Director for due diligence on coal supply to Cirebon Power Station Indonesia
- Project Director for due diligence on coal supply to Paiton Power Station Indonesia

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- Project Director for the due diligence and ongoing project monitoring for a lender for the reopening of a coal mine in the UK
- Project Director for a due diligence and valuation study of a coal mine in Russia, on behalf of lenders
- Project Director for the due diligence of coal suppliers on behalf of the lenders to a power station in Indonesia
- Project Director, Coal Preparation and Financial evaluation of a coal mine for acquisition in Poland
- Financial aspects of a pre-feasibility study and CPR for flotation of a mine/power station in Pakistan
- Report of the coal supply options for a coal fired power plant in Oman
- Due diligence on coal mine methane acquisition in Germany
- Project Director for Preparation of Business Plan for coal Mine in Ukraine
- Preparation of coal preparation aspects of a Competent Person's Report of OKD mines in Czech Republic
- Assistance with coal preparation modifications for the OKD company for 5 coal preparation plants
- Due diligence on coal quality and coal preparation for an acquisition in West Virginia
- Project Director for Preparation of Business Plans for three properties in West Virginia
- Due diligence on the coal preparation plants of OKD a.s., Czech Republic
- Report on the Market Opportunities for UK Companies in Clean Coal Technology, in the USA
- Study into the economic benefits of low ash coal production in India
- Design study for a low ash coal preparation plant in India
- Process design for a tender for modifications to Kellingley coal preparation plant
- Design Study for a coal preparation plant for coal supply to a cement plant
- Technical advisor in a Mediation involving coal preparation in the UK
- Study of coal waste piles in Illinois, U.S.A. for possible power generation project
- Study of the coal preparation market in India, to explore technology transfer opportunities for UK companies
- Coal quality evaluation of Gacko Mine in Bosnia, on behalf of HEP

- Assistance to RAG Trading (Germany) in negotiating coal supply agreement to Iskenderun Power Project, Turkey
- Evaluation of transport options for ST/CMS power project, Neyveli, India
- Lenders engineer (Coal Quality and Transport) for Daewoo's Korba East Power Project in India
- Owners adviser (Coal Quality and Transport) for ABB's Changshu Power Project in China
- Adviser to Flotation Underwriters for a Chinese power company
- Coal quality and sector study for a Turkish lignite mine
- Lenders engineer (Coal Quality and Mining) for a heat and power project in Kazakhstan
- Provision of coal supply advice (techno-commercial) to an Independent Power Project sponsor in Croatia
- Lenders engineer (Coal Quality) for Balagarh Independent Power Project in India
- Lenders engineer (Coal Preparation and Quality) for Visakapatnam Power Project in India
- Lenders engineer (Coal Quality and Mining) for Laibin and Meizhou Wan Independent Power Projects in China
- Provision of coal technology advice and due diligence report on tied coal mine to a Bhadravati Power Project in India
- Provision of coal supply advice (techno-commercial) and due diligence to an Independent Power Project in China
- Provision of coal supply advice, including due diligence of coal mines, to an Independent Power Project in Indonesia
- Provision of tender evaluation services for coal preparation plant for Shell Minerals, South Africa.
- Expert witness (court appearance) in a Welsh anthracite tip washing dispute
- Study of dry coal cleaning technologies for Energy Technology Support Unit, Dept of Trade and Industry
- Preparation of a business plan for a potential privatised British Coal Group
- Review of the UK coal industry for a published study
- Preparation of coal preparation and marketing aspects of a business plan for acquisition of a Region of British Coal for Privatisation

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- Design of a 1,600 ton per hour coal preparation plant in Southern West Virginia USA

1988 - 1989

J Manager Engineering Services, BP Coal (USA) Inc.

Responsible for all projects Mining, Electrical, Mechanical, and Coal Preparation Engineering and Coal Research activities in USA. BP Coal (USA) produced 14 million tons of coal per year.

Projects undertaken:

- Evaluation and refurbishing of an acquisition in Western USA. Project involved Mine Design, Coal Quality Evaluation, Coal Preparation Plant refurbishing and mine sealing.
- Mine design for a green field site in Midwest USA. Project involved design of coal analysis program, Mine design, Coal Preparation and Handling Design, Surface Facility Design, Project Costing and Scheduling, Preparation of Feasibility Study Report and Presentation to Board.
- Construction of 350 TPH Dense Medium Cyclone Plant at Mine 20 in West Virginia. Project involved all Process and Layout Design, Preparation of Invitation to Bid, Bid Evaluation, Contract Award and Supervision. Project completed on time and within budget.
- Exploration programme for Vietnam anthracite evaluation. Designed analytical procedures, reviewed and assessed results, determined coal quality and potential marketability. Carried out conceptual design for coal preparation facility for anthracite production intended for export.
- A feasibility study for tip washing operation at the Old Ben No. 21 Mine in Illinois.
- Research into additives to modify ash fusion temperature of coal and coal dewatering.

1982 - 1988

BP Coal Limited

Manager, Coal Processing

Responsible for all Coal Preparation Operations and Coal Preparation Aspects of Exploration and Research on a world-wide basis. Technical support to Market Dept. for sales of thermal and coking coal.

Plants included:

- 1350 TPH Dense Medium Plant at Middelburg, South Africa
- 900 TPH Dense Medium Plant at Ermelo, South Africa.
- 350 TPH Dense Medium Plant at Eikeboom, South Africa
- 450 TPH Jig Plant at Tahmoor, Australia
- 750 TPH Dense Medium Plant at Newdell, Australia
- 450 TPH Dense Medium Plant at Clarence, Australia
- 900 TPH Jig and Dense Medium Plant at Wollondilly, Australia
- 500 TPH Dense Medium Plant at Glenlee, Australia.

During this time Middelburg Mine was constructed, Tahmoor Plant was commissioned, Glenlee Plant was closed and Wollondilly Plant was sold.

Also acted as the corporate reporting route for the Cape Breton Island tip washing operation - BP Selminco into BP Coal. Involved in planning and control of operations. Later acted as advisor to Selminco's Counsel in legal claim.

Projects undertaken:

- Construction of Middelburg Coal Preparation Plant. Monitored project schedule, managed bulk sampling for potential customers and ran trial preparation test at a neighbouring colliery.

- Exploration Program for Sangatta Project in Indonesia. Designed analytical procedures, reviewed and assessed results determined coal quality and potential marketability. Assessed requirement for coal preparation, managed feasibility study.
- Mine Construction for Sangatta Project in Indonesia. Designed Coal Handling and Preparation Facilities. Monitored Project Schedule.
- Exploration Program for Crumlin Project, Northern Ireland. Designed analytical procedures, reviewed and assessed results, determined coal quality and potential marketability. Member of negotiating team for contract to supply lignite to the power company.
- Research into Froth Flotation of South African coal, Coal Dewatering, Selective Agglomeration, Air Sparged Hydrocyclones, recovery of Oil Shales by Froth Flotation.
- In addition, responsible for the Coal Preparation aspects of numerous acquisitions and regional evaluations in:

Australia	Malagasy
Botswana	Mozambique
Brazil	Saudi Arabia
Canada	Thailand
Colombia	USA
Germany	Venezuela
India	

1979 - 1982

Babcock Minerals Engineering, Retford, England

Senior Coal Preparation Design Engineer

- Responsible for the design, estimating, construction and commissioning of Coal Preparation Plant Contracts.

Designs undertaken:

- 500 TPH Baum Jig Plant for Nandan, India
- 2200 TPH Dense Medium Plant for Southside Project.
- 400 TPH Baum Jig Plant for Leo, Brazil
- 400 TPH Baum Jig Plant for Irui, Brazil
- 250 TPH Jig Plant for Colombia

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- 1350 TPH Dense Medium Plant for Middelburg, South Africa.
- 1500 TPH Jig Plant for Van Dyks Drift, South Africa
- Research into the operation of wide Baum jigs.

1979

NCB South Yorkshire Area

Assistant Area Coal Preparation Engineer

Responsible for the operations of several Coking Coal Preparation Plants in the South Yorkshire Area. This Position was held for 3 months.

1977 – 1979

South Yorkshire Area, National Coal Board

Plant Manager, Silverwood Colliery

Accountable for maintenance, operation, budgeting and planning of a 600 tonne per hour twin Baum Jig, Dense Medium Cyclone and Froth Flotation Coking Coal Plant.

Silverwood Colliery was a strategically important mine the South Yorkshire Area, being highly productive and profitable, producing coking coal.

1976 - 1977

National Coal Board, South Yorkshire Area,

Engineer-in-Training

Engineer-in-Training South Yorkshire Area, National Coal Board.

Engaged in various projects related to plant efficiency of Baum Jigs, Dense Medium Cyclones, Barvois Bath, Nelson Davis Bath, Lebar Bath and Dry Screening applications.

1973 - 1975

Fording Coal, BC Canada

Development Laboratory Manager

Responsibility for the coal analysis laboratory and development laboratories. Coal analysis laboratory carried out routine Proximate, Ultimate and Coking Coal Analysis for this 4 million tonne/year surface mine. The Development Laboratory carried out special projects to improve the efficiency of the plant and improve coking properties of the coal.