

Kevin Rudd B.Eng MSc MBA FIMechE

Education	MBA Business Administration – Edinburgh University MSc Production Management – Leeds Metropolitan University B.Eng (Hons) Mechanical Engineering – Nottingham Trent University
Affiliations	Fellow of the Institute of Mechanical Engineers
Languages English	Basic Dutch, French & German Survival Japanese & Spanish
Nationality	British
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Current Position at CWA

Kevin Rudd is a Fellow of the Institute of Mechanical Engineers in the UK, (FIMechE) and currently is the only active member within the British Cement Industry to have achieved this status. In this role he also mentors Engineers working towards accreditation. With 25 years of experience in the cement industry, his in-depth knowledge covers the following areas: expert witness, specialist support for major insurance claims, plant operations, project/shutdown management, new projects, feasibility studies, technical/financial evaluation, equipment inspection, project monitoring and business management.

Specific Expertise and Experience

- Major cement industry insurance claim investigations.
- Expert witness.
- Advising senior management and cement plant owners/investors.
- Cement plant operation facilities & cement plant best practice worldwide.
- Due diligence.
- Cement plant feasibility studies, audits and evaluations.
- Planning and design of major projects.
- Interviewing and selecting senior managers and technicians.
- Trouble-shooting on critical cement plant equipment - kilns & mills.
- Factory acceptance tests.
- Shutdown management and plant reliability inspections.

Work Experience

2013 – Present

Independent Cement Consultants Limited

Partner, Director and Specialist Mechanical Engineer

Consultancy within the cement sector and other heavy industries. Responsibilities included:

Cement Industry Technical Specialist: Confidential client, Belgium (September 2017 – ongoing)

Provided technical analysis and expert support for a major insurance claim (over US\$300 million), for a major industrial incident.

Chemical Industry Technical Specialist: Confidential client, Finland (April 2017 – ongoing)

Provided technical analysis and expert support for a major insurance claim (over US\$400 million), for an industrial fire - involving 4 kilns.

Project Manager: Factory Acceptance Test Support, Confidential client, Mexico (May 2015 – ongoing)

The main aim of the project is to restore the concentrate production level at the plant to 4.5 million tonnes per annum (mtpa), thus maintaining self-sufficiency of iron ore within Mexico to support Mexican steelmaking operations. The iron ore quality has diminished over time and further processing equipment is required to include a; 40' SAG mill, ball mill, Gyratory crusher and inter connecting process equipment. ICC has provided a team of specialist engineers to provide technical support for design reviews, factory acceptance testing and the preplanning of the installation of the new equipment. ICC then plan to provide onsite Specialist support during the installation of key equipment.

Technical Specialist: Confidential client, UK (2013 - ongoing)

ICC was engaged by 1.5 mpta cement plant to undertake an initial audit and assessment of the mechanical items of equipment at the plant much of which is 30-40 years old. Based on the equipment assessment a priority plan was developed for major capital investment to bring the older

parts of the plant up to date. Technical specifications were prepared for the proposed new equipment and major replacement components (E.g. Mill trunnion and kiln tyre). ICC then provided support for factory acceptance testing and the preplanning of the installation of the new equipment. ICC then provided onsite support during the installation of key equipment (including a ball mill trunnion, kiln tyre and clinker cooler major refurbishment).

**Project Manager: Cement Industry Technical Specialist:
Confidential client, Egypt (March 2016 – December 2017)**

Completed an 'Engineering Audit' to identify improvements within the maintenance and reliability strategy at two cement plants. A complete review of the organisational structure and including the assessment of a third party 'Operations and Maintenance' contract.

**Project Manager: Cement Industry Technical Specialist:
Confidential client, Egypt (March 2016 – December 2017)**

After the completion of an Engineering Audit, ICC provided Engineering Management, Inspector and Planner training to 24 Engineers and Engineering Managers.

ICC also provided Central control room (CCR) process operator training program to 18 Senior CCR operators across three cement plants.

**Project Manager: Techno Economic Due Diligence,
Confidential client, UK (November 2014 – April 2015)**

ICC undertook a techno-economic assessment of a number of fully integrated cement plants and cement grinding plant assets in the UK, that were under consideration for sale. The project involved liaising closely with the potential buyer, financial, legal and environmental consultants, in order to produce a full financial model from raw materials through to finished product considering product qualities, individual product volumes and sales prices. The findings from the detailed study undertaken in an intense timeframe by ICC were compiled into an in-depth report detailing the key strategic features and capabilities of each facility and highlighting significant factors which would affect the future performance and the present-day valuation of the plants. ICC also provided a 'sounding board' for the client's other

advisory partners for general sector issues to support their inputs to the acquisition process.

Cement Industry Technical Specialist: Confidential client, Mauritius (June 2017 – ongoing)

Provided technical analysis and expert support for a damaged cement cargo insurance claim.

Cement Industry Technical Specialist: Confidential client, USA (May 2017 – ongoing)

Provided technical analysis and expert support for a damaged cement cargo insurance claim.

Technical Specialist: Confidential client, Russia (2014)

Provided technical & economic bench marking review to support a potential cement plant acquisition by the client.

Technical & Economic Specialist: The UK Competition Commission (UKCC), UK (2013-14)

The UKCC is an independent public body which conducts in-depth inquiries into mergers and acquisitions, the working of markets and the regulation of the major regulated industries, ensuring healthy competition between companies in the UK for the benefit of companies, customers and the economy.

ICC supported the UKCC in its market investigation into the supply of aggregates, cement and ready-mix concrete (RMX) in GB. The UKCC is reviewing a wide range of measures to reform the cement market in Great Britain (GB), after provisionally finding that both the structure and conduct in the sector limit competition by aiding coordination between certain UK producers.

ICC provided techno-economic support and assistance to the UKCC in estimating the cost of procuring and building a new 1 Mtpa tonne clinker plant on a Brownfield and a Greenfield site in GB. Advice was provided on factors that would point to a higher capital cost estimate and factors that would point to a lower estimate. The analysis included a review of: the economies of scale, likely asset lives, impact of location on plant-specific margins and how best to take account of any differences in the range of assets operated at a plant within

the UK. This consultancy support was provided to the UKCC to assist them with their cement profitability analysis.

Technical & Economic Specialist: Confidential client, UK (2014-2016)

Provided technical and economic analysis and investigation for a multi-million-pound insurance claim, for the failure of a cement plant. This included a technical assessment of flood damaged equipment which had resulted in the closure of the entire cement plant. Further support was also provided to estimate and validate refurbishment plans / costs.

Cement Industry Technical Specialist: Confidential client, Saudi Arabia (February 2016 – ongoing)

ICC provided technical analysis for a multi-million-dollar insurance claim, for the failure of a primary crusher at a 5000tpd cement plant. Supported and strengthened the clients position, resulting in the withdrawal of a major insurance claim.

Technical Specialist: Confidential client, Peru (2013)

Provided technical analysis and causation investigation for a multi-million dollar Insurance claim, for the failure of a kiln. Supported and strengthened the client's position, resulting in all agreement being settled 'out of court'.

Project Manager: Bulk Materials Handling Study - Confidential client, UK (September 2015 – September 2016)

Provided specialist advice for the optimal design of bulk loading systems from silos.

Project Manager: Cement Industry Technical Specialist: Confidential client, UK (January 2016 – January 2017)

Plant status and recommissioning costings review for a 'mothballed' cement plant facility.

**Project Manager: Confidential client, Mill Manufacturer, UK
(November 2014 – November 2015)**

The provision of technical support and practical on-site assistance and advice on the operation of a steel slag mill; particularly with respect to the production of 150D grade product. This involved several site visits to inspect the mill in operation and the provision of advice on possible remedial action to improve performance and to bring the mill closer to reaching the warranted output and product specification. Further assistance was also provided by ICC for future process design assistance and mill product development.

Technical Specialist: Confidential client, Canada (2013)

Led technical investigations and design reviews for 3 iron ore Mills for a new 15Mtpa concentrate plant.

Factory Acceptance Test Specialist: ArcelorMittal, Liberia and UK (2013)

Led equipment inspections and the review of inspection test plans of iron ore ball mills and port materials handling equipment from major international suppliers ThyssenKrupp Polysius and CITIC at numerous locations across China.

2002 – 2013

Atkins

Cement and Heavy Industry Specialist
Expert Witness – Litigation Cases

Confidential clients, Nigeria, UAE, Peru & Mauritius

- As an Expert Witness, provided the lead technical support for a range of confidential litigation cases, providing critical technical analysis, which resulted in four 'out of court' settlement payments and agreements. Clients included multi-national corporations and small independent companies.
- Technical lead for two successful cases against multi-national equipment suppliers resulting in multi-million damages payments to the cement producer.
- Sharjah – UAE, 4500 tpd clinker, main equipment supplier IHI from Japan (2002-2003)

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- Ewekoro – Nigeria, 3000 tpd clinker, main equipment supplier FLS from Denmark (2003-2004),
- Yura Cement – Peru, 4200 tpd main equipment supplier FLS from USA/Denmark (2007- 2011),
- Mauritius – Lafarge, Planning permission study (2010-2011).

Factory Acceptance Test Specialist (2002 – 2013)

- Eastern Province Cement Company, KSA: Managed factory acceptance test visits (Approximately 40) Mechanical, Electrical and Control Instrumentation as well as Process related) in China and India as well as Europe for a new integrated cement plant.
- Riyadh Cement, KSA: Managed factory acceptance test visits (Approximately 50) Mechanical, Electrical and Control Instrumentation as well as Process related) for 2 new integrated cement plants.
- Al Jouf Cement, KSA: Managed factory acceptance test visits (Approximately 10) Mechanical and Electrical around the world for a new integrated cement plant project.
- Aberthaw, Wales, Lafarge: Provided lead specialist support for a replacement mill girth gear and pinion.

Specialist Engineer - Independent Shutdown Support: (2002 – 2013)

Confidential Clients & 8 Lafarge Plants Malaysia, Philippines and Iraq

- Lead advisor invited to assist management teams at a number of clients and Lafarge plants in order to support improvements in the reliability strategy and the inspection, planning and execution activities of maintenance for critical pieces of plant. (Kilns, Crushers & Mills). Visits were undertaken prior to and during major shutdown activities.
- This has taken place as required / when there is availability and remains to be a popular requested service for cement plants of varying size from

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2400 tpd – 7200 tpd with experience gained working with the main European & Asian equipment suppliers.

**Project Monitoring Consultant - Kiln Upgrade Project:
Garadagh Cement (Holcim), Azerbaijan (2008 – 2013)**

- 4000 tpd integrated cement plant, brown field site with CBMI from China as the main equipment supplier under an EPC turnkey contract, with European sub suppliers for critical components. After completing the initial due diligence and revised feasibility study on behalf of an investor (EBRD). Monthly input was provided reviewing and prompting site performance/activities with quarterly site visits undertaken to support/intervene as required to ensure the project stayed on track for successful completion.

**Project Director / Specialist Adviser
Greenfield Cement Plant Project – Monpolymet, Mongolia
(2011 – 2012)**

- 3000 tpd Greenfield site project, supported the client to arrange finance, technical partnership, legal agreements and through to the tendering stage

**Project Manager
Kiln Expansion Project: Cima Cement, Malaysia
(2006 – 2008)**

- 15% Expansion project of an integrated cement plant from 3600 tpd to 4150 tpd clinker for a brown field site. Project Manager responsible for completing an initial expansion feasibility of the project, through to evaluation of tenders, contract negotiation and project implementation. Activities included managing an onsite team of specialists and head office specialist support services required to complete the project.

**Project Leader - Techno Economic Due Diligence:
(2007 – 2013)**

Confidential clients (Both Multi-nationals and Independents),
Mongolia, Ukraine, Kazakhstan, Siberia

- Technical lead on a range of studies on behalf of the EBRD, including brown field and green field studies,

with a range of contracting arrangements, including EPC contracts, involving CBMI, KHD, FLS & Other Chinese equipment sub suppliers. Some of these projects are still

awaiting finance and commercial approval for completion but are technically feasible and range in size from 2000 tpd to 5000 tpd.

**Project Monitoring Consultant - Kiln Upgrade Project:
Nasice Cement, Croatia (2004 – 2007)**

- 25% expansion project, from 2000 tpd to 2500 tpd clinker, with many equipment suppliers. Project Leader for a technical and commercial review of Nasicecement, the second largest cement producer in Croatia. Subsequently was appointed to serve as a lender's engineer in connection with the loan for the expansion and modernisation.

**Project Manager – Green Field Feasibility Study:
(2004 – 2007)**

Confidential clients, Yemen, Mongolia & Egypt

- Led both confidential clients from first concept to completion of Due Diligences for 3 green field sites. One project failed at the due diligence stage. The other two projects, assistance was provided to prepare tender documents and help arrange a partnership agreement to support the new incoming client in the cement industry and later provided ad-hoc specialist services.

**Project Manager - Kiln Expansion Project:
Eastern Province Cement Company, Saudi Arabia
(2002 – 2005)**

- 3,500 tpd clinker, main equipment supplier Polysius, Germany. Kevin led Atkins, who was selected to prepare Invitation to Tender Documents and assist the cement company in the selection of contractors for the modernisation and expansion of its' cement plant. Atkins defined the scope of work for contractors and prepared tender documents for a number of turnkey packages. The plant expansion package included a new kiln line rated to produce 3500 tpd clinker, a new raw mill and a clinker cooler. Atkins reviewed all tenders and made

recommendations. Kevin was appointed as Project Manager for Atkins as the owners engineer for the new kiln line project, including providing a team of engineers based at site to supervise and project manage the new installation. Atkins also supported the client by providing a group of cement specialists in the UK head office reviewing the plant design as well as completing factory acceptance test visits for all major equipment items.

2002 – 2003

**Project Manager - Alternative Fuels Feasibility Study:
Buxton Lime Industries, UK**

- Lead advisor to assess the potential of starting to use alternative fuels at a 2500 tpd FLS cement plant. Included; auditing the plant equipment for suitability of using different alternative fuels, devising an implementation plan, providing layout drawings and introduced the client to equipment suppliers and contractors in order to commence the project.

1999 –2002

**Blue Circle Industries Plc (Now Lafarge)
Senior Mechanical Engineer**

- Country Manager for Zimbabwe, Egypt and Kenya: Involved co-ordination, organisation, implementation and follow-up of multi-disciplined support services including specialist support for two new kiln line projects (Tokura - 1500 tpd was never completed for commercial reasons, Alexandria – completed, FLS 4200 tpd clinker plant).
- Planning and designing major projects, tender evaluations and co-ordinating multi-discipline technical support.
- Evaluating proposed company acquisitions and Due Diligence (Malaysia, Egypt & The Philippines).
- Giving valuations of existing acquisitions and conducting technical surveys and audits of works.
- Assisting Best Practice Performance and transfer between across the group with operations in the United States, Malaysia, Zimbabwe, Nigeria, Kenya, Philippines, Egypt, Canada and the UK.

- Assisting works with shutdown activities and general problem solving at various locations, including critical equipment inspections and design calculations of girth gears, kiln tyres and mill main drive systems.
- Member of the Reliability Team at BCTC developing major shutdown strategy, lubrication strategy, root cause analysis problem solving techniques, management and implementation across the regions.

1995 – 1999

Blue Circle Industries Plc (Now Lafarge)

Senior Engineer

- All aspects of running an engineering department at a heavy industry location which included: Design out of system problems, planning and prioritising of maintenance and dealing with front line breakdowns, people management, appraisals, budgeting and ensuring availability of stores items.
- Leading a group of skilled crafts people and engineers operating within the wider plant management team.
- Part of Cement Milling, Distribution & Alternative Fuels teams for a multi-million pound works upgrade projects.

1994 – 1995

Top Treads Ltd / Leeds Metropolitan University

Production Engineer

- Developing and implementing the Health and Safety policy, preventative maintenance schedules for production machinery and a standard spare parts list and stock level for the company.
- Setting up new starter induction periods and training schemes for all employees as part of the Investors in People framework.
- Maintained the company's BS5750 accreditation and developed and implemented incentive payment schemes.
- Researched and lead a team looking at alternative uses for un-usable tyres, such as fuel in cement kilns.
- Provided methods of monitoring product quality and analysing the quality of the products produced.

1992 – 1993

Nuclear Electric Plc, Sizewell 'B' Power Station

Production Engineer

- Supervision and co-ordination of the installation of primary circuit insulation and the flux mapping system at the heart of the only reactor of this type in the UK.
- General support to engineers with construction activities.
- Resolving technical queries such as design problems, equipment interfaces, raised by the management contractor at site.
- Liaising with multi-disciplined engineers in critical risk areas of the project.

Cement Publications

Does Quality Still Matter? World Cement, March 2018

Cemtech Conference Presenter, Factory Acceptance Testing Prague, October 2013

Mechanical Integrity and Reliability Audit, World Cement, September 2013

Factory Acceptance Testing - Fit for Purpose - International Cement Review, February 2013

Engineering Consultancy in the Cement Industry- World Cement, Sept. 2011

Expert Witness Cases - International Cement Review, July 2011

Selecting Turnkey contractors, Cost Vs Value – World Cement, Sept. 2010

Getting the job done – International Cement Review, July 2010

The Monitors Role-World Cement, Aug.2005

From Audit to Realisation - International Cement Review, July 2004

Plant Designing for Maintainability- Cement Lime Gypsum, Nov.2003

Condition Based Maintenance- World Cement, June 2003

Shutdown Management- International Cement Review, Dec.2002