

Michael Francis Turner

Chief Engineer



Profile

Mike originally trained as a civil engineer, working on national infrastructure projects in the 1970s and 80s. The last 25 years of Mike's experience has mainly been mechanically biased with his structural experience supporting his involvement in materials handling and piping schemes.

He has a breadth of experience in innovative projects such as inspection gantries on suspension bridges.

Key Experience

- Piping designs for all industries in particular pulverised fuel and steam systems in power generation
- Structural design of the handling systems and conveyor systems on tunnelling machines
- Directional drilling of pipelines under roads and rivers
- Material handling projects for coal and for the quarrying industries

Profession

Civil Engineering

Joined Atkins

October 2008

Nationality

British

Qualifications

BSc Civil Engineering, MSc, DIC
Concrete Structures

Professional Associations

Experience with Atkins (October 2008 - Present)

- Directional drilling support to Stockton Drilling – subsea cable duct pipework and mapping support
- Solan Oilfield process pipework design
- Astra Zeneca steam and hot water pipework analysis and boiler installation design.
- Design of inspection gantries for the Humber Bridge suspension cables
- Piping design for mechanical handling of ponds slurry at Sellafield
- Removal of protection canopy on Forth Road Bridge

Experience with MG Bennett & Associates Limited

1984 to October 2008 - Engineering Director and Principal Structural Design Engineer

Power and Piping Systems:

- Survey, audit and re-design of supporting structure for the pulverised fuel system at Drax, Ferrybridge, Ratcliffe and Thorpe Marsh power stations for CEGB - NE Region
- Design of directional drilling profiles and equipment for tunnel extension at Folkestone for water supply system
- Isle of Grain power station:
 - Working for Stockton Drilling providing detail design of sections of the 18" heavy fuel oil line to the EON Isle of Grain power station
 - 24" Natural gas pipeline run involving two sections of horizontal directional drilling. The pipeline to provide gas to the new gas fired power station
 - Feasibility study on the a 36" Gas distribution line – AMEC
- Design of 4 off sections of horizontal directional drilling for a 48" HDD gas distribution pipeline – AMEC
- Design of 9m diameter Absorber for DERA Farnborough
- Survey, layout and design of various overland pipelines for the transmission of oxygen, nitrogen and argon gases for BOC

- Survey and modify valve arrangements for 26 existing piping fuel installations for Stockton of Wakefield
- Layout and design of a 6km pipe pull for a 500 NB oil pipeline located in Croatia
- Design at various directional drilling sites for service crossings of estuaries, rivers and motorways including 2 Km Dudden Estuary for British Gas
- Design of Power Piping Systems for new energy centre at AstraZeneca, Alderley Park site
- Design calculations for pressure vessels
- Design proposals and feasibility study in connection with Landfall at Dutch Coastline of North Sea Gas Line for the Britannia Project
- Structural Design of skid frames for offshore modules for Marathon Oil Brae Field Development, BP Chemicals Ltd, Phillips Petroleum UK Ltd, ARAMCO, Saudi Arabian Oil Co plus others
- Design of pressure vessels and pig traps both for sub-sea and topside installations related to various offshore operating companies including Phillips Petroleum (UK) Ltd, ARAMCO, Saudi Arabian Oil Co, plus the design analysis of a Quick Release Band-Lock Mechanism
- Inspection of various tank installations for the water and chemical industries

Nuclear Related Projects:

- Design of 48" dia water-cooling pipe work for Sizewell 'B' Nuclear Power Station
- Structural calculations for Gas Circulation Crane at Dungeness Power Station

Moveable Structures:

- Design of the dehumidification and inspection gantries for the Forth and Severn bridges
- Sammy's Point Swing Bridge – design of footbridge extension, River Hull, Kingston on Hull (The Deep Project)
- Design of Tai Lam Rail tunnel cross-over doors, Hong Kong
- Design of signal gantries for Channel Tunnel rail link scheme
- Investigation on swing road bridge – Bermuda
- Design assessment of 860 ton Poulton Road swing bridge – Merseyside
- Design calculations for Oldham Canal lift bridge
- Design assessment of six moving bridges in Scotland
- Design of mechanical modifications for Channel Tunnel rail cross-over doors
- Structural design to BS5400 of a 10.6m span by 8.5m wide Bascule lifting bridge

Structural Design:

- Design of coal handling system for Manjung Power Station - max tonnage 6700 tons/hour
- Design of port stack out/ reclaim facility for Coal Handling Plant, Tianjin Port
- Design of the Bronze Clad Cone at Greenwich Observatory
- Design of 80m footbridge over the River Aire, Leeds
- Structural assessment and design for the hanger cables on the Humber Bridge
- Design of 500t bunker and screening plant
- Structural Investigation and repair of the bucket wheel reclaimer at Drax Power Station
- Structural design of hopper for lime hydration plant in India
- Structural design of screening plants
- Design of tubular steelwork for offshore production platform flue stack
- Design of "Californian" rail crossing in CTRL tunnels
- Design of main power unit structure for Naco Nagales – Mexico
- Design of acoustic enclosure and shaft top facility for Green Park Station, Jubilee Line
- Design of 200t structure and ducting for DERA Farnborough
- Stress analysis of aluminium die cast component for textile machinery
- Re-design of accommodation platform jacking mechanism
- Temporary works and gantries for installation of cable dehumidification system on the Forth Road Bridge. Mechanical design for injection exhausts

Experience with Skeltonhall Limited

1980 to 1984 - Consultancy Manager

Appointed Consultancy Manager of Skeltonhall Ltd with responsibility for the consultancy services of the company and also for the structural and mechanical design and stressing of components for 'in house contracts. Specialised in the design of catchgear installations within existing colliery head frames, conveyor systems and transfer towers, and screening plant. Land surveys and routing of gas transmission pipelines.

Experience with F R Jenkins & Partners

1974 to 1980 - Engineer

Engineer responsible for the surveying, structural design calculations and site checking of steel and concrete structures for offices, banking accommodation and factory complexes. Pipe and pressure vessel stressing. National Coal Board headframe structures and catchgear design. Solely responsible for the structural design of a replacement 100ft high shaft headframe at Sharlston Colliery. Tunnelling equipment design and stressing of components.

Experience with George Wimpey

1972 to 1973 - Design Engineer

Design Engineer in George Wimpey structural design office. Designed concrete structures for multi-storey housing and factory complexes. Site engineer responsible for surveying and setting out of road and structures on M6 Motorway construction and on piling contract at Harland & Wolfe dry dock.

Recent Training and CPD

- Research into publications and standards required whilst undertaking design work on projects
- Up to date training in Quality and Safety Procedures
- Training on the updated requirements for the design risk assessments in accordance with the Construction (Design and Management) regulations 2007