



RISK MANAGEMENT PROFILE



RAIL
TRANSPORTATION



Since the early days of Corporate Risk Control in the dawn of the 1980's, we have been involved directly or indirectly with rail transportation systems.

Pre CRC, the principal had been a project engineer with a firm of consulting engineers in Scotland. During that time, in addition to an active involvement in the design and construction of industrial facilities, attention was required in the installation of railway track for use as private spurs serving loading and unloading plant and equipment, handling bulk minerals and liquids.



In conjunction with British Rail engineers, bridge replacement was a task that entailed precise preplanning and timing in order to demolish the existing structure and roll in place the replacement prefabricated structure, lay ballasted track, all between the hours of the last scheduled train through and the first early morning traffic.



Considerable involvements included engineering input to motive power depots such as Eastfield, British Rail, Glasgow, and a frequent contributor to heritage railway systems ensuring the longevity of historic rail locomotives, vehicles and buildings, all of which are the direct descendents of the railway born in United Kingdom some two hundred years ago, and has significantly been a key factor in the shaping of the global economy since.



Corporate Risk Control has, over the years been involved in railway systems for and on behalf of insurers and insurance brokers, preparing pre risk condition surveys, construction projects reports, and being actively involved in ongoing risk management from initial concepts, construction, through commissioning to hand-over and revenue earning operations.



On behalf of insurance interests, CRC has provided risk analysis and ongoing risk improvement audits, and, underwriting interests reports in many parts of the globe.





Singapore MRT - the first two phases of construction, on behalf of international insurance brokers on behalf of the client Singapore MRT, underwriting reports and risk analysis.

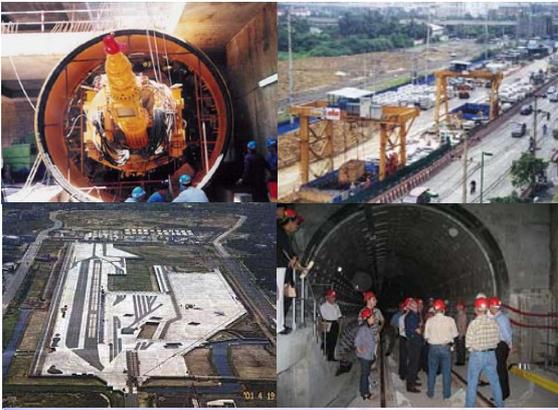
Newcastle Upon Tyne light rail Metro - Underwriting reports during the final phases of mechanical and electrical installation, integrated testing, trial running and commencement of revenue earning, for and on behalf of international insurance brokers.

Bangkok Transit System (BTS) - Thailand mass rail transportation system, underwriting related co-operation from concept risk analysis, through construction phases to final commissioning and currently on going risk management involving :

- **Condition monitoring**
- **Claims and accident investigation**
- **Normal operational hazards reviews**
- **Depot and stations fire protection audits**
- **Crowd control analyses**
- **Simulated emergency response observation and advisory input**

Ongoing Systems Auditing and loss prevention

- **Stations**
- **Depot complex**
- **Administration building**



**Bangkok Metropolitan Company Limited
Chaleomratchamongkol Line, Thailand**

Since the concept, we have integrated risk analysis with design and construction engineering for and on behalf of international insurance brokers serving the underwriting needs of the client owner MRTA, and concessionaire, BMCL.

An in-depth analysis was conducted reviewing a range of exposures likely to be encountered during the tunneling and station box construction phases. With judicious engineering caring and attention skills effected by joint ventures teams of highly experienced engineers, only minor problems were encountered and the civil works progressed ahead of schedule.

CRC involvement has continued into the operational phases integrating risk handling with operations, for and behalf of BMCL and international insurance brokers, AON (Thailand) Ltd.



KCRC, Hong Kong

Again on behalf of leading insurance interests, Corporate Risk Control has embarked on risk exposure audits and the preparation of risk assessment reports tailored specifically for underwriters.

The reports addressed exposures pertaining to the light rail and heavy rail divisions of KCRC.

Inspections and auditing covered depots, trackway and vehicle operations, including a review of procedures and rule books, and the integration of light rail and road vehicles at road/rail crossings.

Reviews and hazard analysis also addressed the problems associated with heavy rail operations pertaining to diesel locomotive hauled goods trains and electric multi vehicle consists trafficking between Hong Kong and the border with China. The China originating goods vehicles had frequent wheel climb problems which were also reviewed in conjunction with engineering consultants specialising in rail transportation.





In addition to the foregoing, we have been involved in :

Rail networks at Bandar Abbas, Iran, marine port. Construction works proximate to rail operations on several areas including Scotland, Saudi Arabia, Malaysia Ports and USA.

Marine and road transportation of imported rail vehicles.

In virtually all underwriting related risk assessments and reports destined for insurance marketing, a comprehensive range of topics are viewed, assessed and where possible tested. Topics include :

- *Review of Rule Books and their methodology in compilation.*
- *Interlocking Signalling and Communication.*
- *Automatic Train Protection Systems.*
- *Driver Training and Refresher training*
- *Driver and Observer operations, as appropriate to systems.*
- *Operations Central Control Room Integrity.*
- *Results of Pre Commissioning Integrated Testing.*
- *Emergency Incident Response Planning.*
- *Degraded Condition Planning.*
- *Fire Protection, Stations, Tunnels, Elevated Structures, Traction Power Stations, Control, Rooms and Vehicles.*
- *Third Party Exposures, buildings under construction, hoardings and temporary signs, unauthorised structures near to railway envelope*
- *Overpass and Underpass exposures.*
- *Vandalism and aggravated trespass.*
- *Health, safety and environmental controls.*

Security :

Depots, stations, system employees and the travelling patrons. Security would also include cash in transit, cash facilities, and would further include counter terrorism activities as practicable as possible.

Overall Risk Management policy and procedures.



Corporate Risk Control has enjoyed being in co-operation with several rail related experts and organisations, covering construction operations and incidents requiring investigation towards preventing a recurrence. We at Corporate Risk Control maintain formal retained contract and informal connections with approved consultants in addition to our own staff in order that we can provide best service and advice without compromise.

Whether an inspection and report for insurance marketing, training with other long term experienced operators or a specific rail related enquiry, we are confident that we can provide the necessary input.

Corporate Risk Control has a proven track record in risk management.

Risk is not an option - Management is.

For further information on our transportation risk management,

please contact us at info@corporateriskcontrol.com or telephone number (66)2 655-6731.

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