

**LegCo Panel on Transport**  
**Subcommittee on matters relating to railways**

**East Rail underframe equipment mounting problem**

**Purpose**

This paper sets out the initial findings of the Administration on the East Rail underframe equipment mounting problem, and information on Government's existing regulatory regime on railway safety.

**East Rail Underframe Equipment Mounting Problem**

2. On 22 December 2005, the Hong Kong Railway Inspectorate ("HKRI") received notification from Kowloon-Canton Railway Corporation ("KCRC") that on 21 December 2005 at Fo Tan Station a train driver had found the compressor mounted underneath the train appeared to be loosened. Passengers were required to take another train. Between 22 December 2005 and 10 January 2006, the Government did not receive any report from KCRC on the incident or any information that might suggest a similar problem for other East Rail trains.

3. Upon notification of the single East Rail incident happened on 21 December 2005, the first and foremost concern of HKRI was to ensure the safe operation of East Rail. HKRI immediately enquired KCRC whether there was any injury to passengers or damage to the train. KCRC replied that there was no injury to passengers. KCRC also advised that the mounting of the compressor of an East Rail train was found loosened but confirmed that there was no equipment or parts falling onto the tracks. KCRC indicated that it had already completed a fleet-check immediately and confirmed that no abnormality was found on other trains. It added that the Corporation would send the mounting in question to laboratory testing. The Corporation was then advised to report to HKRI if there were any abnormal findings. Based on experience, it usually takes several weeks to complete the laboratory testing. In fact, up to 17 January 2006, the results of the laboratory testing are still not available. Based on information available at the time,

the incident was an isolated case with no immediate safety risk to passengers.

4. In the afternoon of 10 January 2006, Government was notified of the fleet-wide equipment mounting problem. We considered that the problem was a very serious issue and took prompt action by sending HKRI to the site on the same day to collect more information from KCRC in order to ascertain the size of the problem and understand KCRC's immediate rectification measures. On the following day (11 January 2006), KCRC provided further information on the problem to HKRI. Having regard to the fleet-wide nature of the problem, on 11 January 2006, the Government set up a designated expert team comprising the HKRI and Electrical and Mechanical Services Department ("EMSD") to conduct a detailed inspection of the trains concerned in order to ensure railway safety.

5. KCRC did not immediately notify the Government when the Corporation was aware of the fleet-wide underframe equipment mounting problem. On this, Government issued a warning letter on 11 January 2006 to remind the Corporation that it should promptly notify the Government of any safety problem or incident relating to the railways in accordance with the KCRC Regulations and established procedures.

#### Government's assessment

6. Railway safety has always been the primary concern to Government. In the light of the fleet-wide problem of East Rail trains, we have reinforced the 7-member HKRI team by seconding 8 professional and inspectorate staff from EMSD. They are assigned to, inter alia, assess the scale of the problem, examine the effectiveness of the improvement measures, and monitor the subsequent 48-hour regular checks. The visual fleet check of all 29 sets of trains on the nylon strapping was substantially completed by Government Team on 15 January 2006. Based on the observations and information available ever since 10 January 2006, our assessment and follow-up actions are as follows-

- (a) KCRC has installed metal cradles for all compressors on East Rail trains and that nylon belts have been installed on all major train equipment. KCRC's measures have been verified by the train builder and local independent experts engaged by KCRC that the measures could effectively minimise the mounting problem of underframe equipment and could ensure the continued provision of a safe railway service;
- (b) the monitoring cycle of the trains by KCRC every 48-hour should be able to detect any changes in the integrity of the train equipment mounting as well as the temporary strengthening measures of metal cradles and nylon belts; and
- (c) so far based on the reports from KCRC's experts and our inspections, the interim rectification measures carried out by KCRC should mitigate any immediate safety risk to passengers.

7. To further enhance the safety of passengers, we have requested KCRC to implement the following-

- (a) to expedite the installation of the metal cradles for all the major equipment, and to expedite the identification of the root cause of the problem;
- (b) to review the current asset management programme and investigate the reasons why the present problem could not be detected earlier during KCRC's routine maintenance and regular safety audit; and
- (c) to comply with Government's additional requirement that KCRC should submit certification on the safety of all East Rail trains for passengers' service each day before commencement of passengers' service.

8. The Government will conduct spot checks to inspect whether KCRC is monitoring the integrity of the major underframe equipment mounting in a robust manner and whether this is being done every 48 hours as pledged by KCRC.

9. On the root cause of the problem, we note that KCRC has presented some initial findings at its press conference. We require KCRC to submit a formal report once the technical investigation is completed. Meanwhile, the HKRI is collecting further data from KCRC and is in the process of analysing them. No conclusive view can be formed at this stage. To ensure that Government can have a thorough assessment, we will appoint an internationally renowned railway expert to help assess the root cause of the problem, examine the robustness of KCRC's present rectification measures and its proposed long term improvement measures upon the completion of its technical investigation.

10. The Government will also appoint a special investigation committee comprising prominent community personalities and independent non-executive Board members. The special committee will carry out independent investigation into, inter alia, how KCRC has handled the East Rail incidents, the reporting within the Corporation, the required notification to Government, and the interface between KCRC and HKRI in handling this East Rail problem. The committee will make suggestions where necessary.

11. Given the need to pool all resources to ensure railway safety and to enable continued operation of East Rail, both the Government and KCRC have to accord priority to the root cause of the problem and putting in place the necessary rectification measures. The commencement of the work of the special investigation committee mentioned in paragraph 10 above will be decided later having regard to the progress of resolving the present underframe equipment mounting problem.

12. Regarding the East Rail service level, KCRC has switched to use manual train operation under the protection of Automatic Train Protection ("ATP") system on 15 January 2006. The Transport Department's ("TD") Emergency Transport Coordination Centre has continued to closely monitor the railway services, and has kept in close liaison with both KCRC and other public transport operators. Should there be a need for any changes to East Rail services, we will activate public transport contingency arrangements to minimise the inconvenience caused to the public.

## **Existing Regulatory Regime on Safety of Railways**

13. KCRC is required to maintain a safe and efficient service at all times in accordance with the KCRC Ordinance (Cap. 372) and the established regulatory regime by the Government. It is the primary statutory responsibility of railway corporations and in this case, KCRC, to ensure the safe operation of the railways. Amongst other things, KCRC is required to maintain a safety management system to minimise safety risks as far as reasonably practicable, to notify the Government of all safety related incidents occurring on the railways in accordance with the KCRC Regulations, and to engage an independent expert to review its safety management system at a regular interval of not more than three years, etc.

14. The HKRI assumes the regulatory role on railway safety. Inspectors of the HKRI are professional engineers from civil, electrical, electronic and mechanical disciplines. Both MTRCL and KCRC are required to demonstrate to HKRI that proper operation and maintenance procedures and facilities are in place and staff are trained to take up their duties related to the safe operation of the railway. HKRI conducts regular meetings with both railway corporations and site visits to inspect the maintenance works of the railway and to ensure that all safety-related works are being properly carried out by the Corporations.

15. On handling railway incidents, in the case of KCRC and in accordance with the KCRC Regulations, the Corporation is required to submit reports as soon as practicable on incidents which have implications to the safe operation of the railways. HKRI will critically review these reports and consider whether there is any immediate safety risk to passengers. It will also examine whether the Corporation has taken proper actions to identify the cause of the incidents and implement effective rectification measures. HKRI will give advice to the Corporation as appropriate and closely monitor the progress of the rectification measures. If there is any slippage, the Corporation will need to give explanation to HKRI.

## **Conclusion**

16. The Government is very concerned about the fleet-wide underframe equipment mounting problem of East Rail. We are now taking active steps to investigate into the incidents and the initial findings is that there is no immediate safety risk to passengers. Meanwhile, we are closely monitoring the situation and will continue with our investigation works to ensure that KCRC is properly addressing the problem and that effective long-term rectification measures will be formulated and implemented as soon as possible.

ETWB

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