

## **RAILWAYS TRAIN GLAZING**

The Fire Service Inspectorate Operational Practices Section were contacted by a train operator and asked to assist with the production of a video and manual on their new train. The video and manual is for the use of Fire & Rescue Service (FRS) personnel and provides information about the train and details the hazards that are to be found aboard. The Fire Service Inspectorate, Fire Service College and a small group of representatives from FRS's worked with the operator to agree the content. The video and manual will be circulated to all FRS's, which have the trains passing through their areas once it is complete. Details will also be included in the new Fire Service Manual on "Railways" that is being drafted at the present time.

It is also intended to use the video and manual to advise the Railway Inspectorate on the level of information that FRS's require as part of the acceptance test of any new trains.

Whilst participating in the production of the video FRS members became aware that the style of trains have changed with one of the main areas being glazing. This is as a direct result of Public Enquiry Reports which emphasised that more needs to be done to contain passengers within the train following an accident. This coupled with the need to ensure passenger comfort, similar to that of an aeroplane, has resulted in different construction and much thicker glazing being used. As part of the video production the group experienced the difficulty in gaining access through a window. Windows are not the first choice for access but with regard to this particular train there is only one door on each side of every carriage. Therefore if the train is on its side there is only access through one door. There may also be the need to secure alternative means of access/egress or to create space by glass removal.

The group was concerned with the level of effort required to actually break through the glazing and therefore enquiries were made with some of the glass manufacturers and fitters. It became apparent that there is now a wide range of glazing types and thickness on current trains and these changes will continue to evolve in the future.

"PSV Glass" of High Wycombe kindly offered to work with the Fire Service Inspectorate and the Fire Service College to identify the various types of glazing in use and to determine the best method of entry. It quickly became apparent that there are too many types to try and identify individually and it was decided to look for the worst case scenario with regard to gaining access. A glass processor provided seven samples and PSV Glass provided a framework to sit the panels in and the facilities to undertake some practical glass breaking demos. They also provided a video CD of the glass breaking and a copy will be provided (under separate copy) to this electronic DCOL (CFO's only). This explains the different types of glazing and the methods used to gain entry. When viewing the CD please bear in mind that the voice over and text has not been provided by FRS and some of the terminology used is not FRS language. It should be noted that an envelope was cut in each window to allow access. For the purposes of the demos the "flap" was at the top of the window. In an operational environment the "flap" would normally be at the bottom unless complete glass removal is required. However this does not detract from the message that the CD is trying to get across.

The CD details the seven different types of glazing used for the demonstrations and the very worst case likely to be encountered undertaken last. It is self explanatory and what is clearly obvious is that with any of the types of glazing likely to be encountered great difficulty is experienced in gaining access unless a saw is used. The 'glasmaster' saw and a reciprocating saw were used to good effect with the reciprocating saw causing less physical stress for the handler.

It is therefore recommended that all personnel are advised that when attending train incidents the best method to employ, if access has to be made through the glass, is with a reciprocating saw.