

Message to the next generation: Chroniclers of Safety (Narrators of Oral History)

Progressively passing on experiences from one generation to the next

The experience which taught me the most about the importance of safety was a man-vehicle accident which occurred at the Omiya Yard in 1969, in which I lost my best friend. He and I had joined the company the same year. I still clearly remember his parents' sorrow when I visited them to deliver his remains and the grieving of his supervisor and colleagues.

When I was Marketing Department Deputy Manager, I was given the assignment to formulate a "Prevention Manual for Man-Vehicle Accidents." I may have received the assignment partially because I had experienced such an accident in the past. I worked strenuously on the prevention manual through my reflections on that event. At the time, JR East had a prevention manual for ground facilities maintenance workers but there wasn't one for station staff. It was the first opportunity to formulate such a manual. However, the complicated part of creating a manual is that a manual will sometimes prevent field site employees from thinking beyond its contents and accidents usually do not occur as they are written. Therefore, it is necessary that we take it upon ourselves to "think, act and challenge for ourselves."

As a Chronicler of Safety, I am mainly in charge of "dispatchers" and "stations." Dispatchers give directions by watching monitors and are not able to see accident conditions directly. Then, experiences at field sites will be necessary. The time sensations of dispatchers who are just waiting for information at the control room and that of field site workers who are physically moving fast at the site are totally different. It is important to give consideration to the situation of field sites when providing directions. For safety, it is vital that we obtain as much information as possible from as many field sites as possible.

Accidents may be rare but they should never happen to begin with. This conviction leads me to believe that I am obliged to pass on the experience of losing my best friend in an accident to the next generation. I strongly hope that JR East will find a way to safety from experiences of Chroniclers of Safety like myself from the days of JNR and hope that JR East employees who shoulder the next generation will have a faith in "pursuing extreme safety levels."



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Double checking from another perspective

Railway signaling facilities have two major roles: to provide safety for preventing accidents, and reliability for operating according to the schedule. Safety is of top priority, and by securing safety first, signaling facilities can contribute to reliable transport. For this reason, as a general rule, when signaling equipment fails, it is designed to stop trains. However, if we stop trains even with minor troubles, transport reliability will deteriorate, and the important balance will be lost.

From my experience, the major risk with signaling facilities is fire in the equipment room. In stations, there are equipment rooms which are the keystones of signaling. Though infrequent, a rapid increase in voltage sometimes causes an equipment room fire, and this stops all electric trains. When this happens, emergency recovery is needed. The recovery work involves the rewiring of more than 5,000 wires, a job which cannot be completed in just one or two hours. As facilities maintenance workers, we need to secure safety of operations, while being able to restore signaling functions as quickly as possible.

As a Chronicler of Safety, I would like to pass on two things: be wary of hardware, and always confirm by double checking from an alternative perspective. When it comes to signaling equipment, a single mistake in wiring could lead to an accident. Ideally, equipment at field sites should be in the same condition as planned on paper, but we should never ignore the possibility that the equipment may have undergone some modifications, or may be scheduled for repair at a later date. For these reasons, it is important to remain wary, and to not assume anything from the start, but to reconfirm that everything is as it is designed to be. For this, check everything twice and, if possible, ask someone to check it all again. In doing so, I believe that we can help reduce the risk of events which we might never expect to occur.



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Learning from other people's experiences

On January 17th, 1995, at the time of the Great Hanshin-Awaji Earthquake, Shinkansen elevated bridge columns in the JR West service area were destroyed as if being bent at their knees. I have never in my experience seen these columns damaged to that extent. At the time, I was a manager in charge of civil engineering at our Track & Structures Maintenance and Electric Engineering Dept. Three days after the earthquake occurred, as a member of a technical support team from JR East, I joined an investigation team to study damage conditions. Utilizing the combined experience of the investigation team, we reinforced Shinkansen elevated bridges within a 3 km radius of all active faults in the JR East service area. Sometime later, in October 2004, the Niigata Chuetsu Earthquake occurred. At the time of the earthquake, *Toki No. 325* derailed, but fortunately the location of the Shinkansen derailment was exactly at a place we had reinforced after the Great Hanshin-Awaji Earthquake, so our elevated bridges stayed intact and there were no fatalities. As in an old saying, rock on another mountain (meaning "learning from others' mistakes"), this event made me realize again that it is vital that we thoroughly investigate events which occur in other places, predict whether there is a possibility of the same risk in our own service areas, and take appropriate countermeasures.

As a Chronicler of Safety, I am in charge of civil engineering and disaster prevention and, in many cases, we face forces in nature of which we will never be able to control. Accordingly I believe that it is JR East's responsibility as a railway operator to minimize the effects of such natural disasters as much as humanly possible so that even when there is a natural disaster, fatality can be avoided. In order to do so, we must carefully learn lessons from the past and keep learning as it is extremely difficult to make assumptions on areas in which we do not have experience. It is important to carefully and humbly analyze each and every event and to consider each time that we have learned again from nature, comprehensively and accurately search out the possible causes, contemplate what we can do to eliminate them in the future, and take action. A purposeful compilation of past and present experiences is indispensable in securing the safety of trains from natural disasters. I would like to pass this mindset on to the next generation.



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Prompt decision making is critical for safety

When JR was established upon the division and privatization of JNR, we made a major change in our safety consciousness. Our speed has increased in both decision making and response. Presently, at the time of an accident, we resolve the prevention of recurrence of the same accident. To this end, as an organization, JR East promptly determines countermeasures and takes action.

In 1988, shortly after the division and privatization of JNR and the establishment of JR East, an incident occurred in which a train at Ueno Station did not stop at the 3rd yard signal, which was showing a stop indication. At the time, another train was proceeding in the direction of that train, and if the train had not been stopped, a collision would have been unavoidable. Fortunately, in this case, the collision was avoided. However, the response of our newly born Railway Safety Promotion Committee at the time was striking. From the sense of crisis that this kind of event could happen again unless there were systematic prevention, in spite of the cost, JR East promptly decided to accelerate the introduction of the latest automatic train stop system, ATS-P, which is superior to regular ATS in safety. I think this speed in decision making as an organization has been a major characteristic since the establishment of JR East.

From my experience, major accidents and troubles tend to happen when there is something abnormal. For example, accidents or troubles tend to occur when a train stops because of a signal failure or a brake failure and resumes operation after recovery. At the time of such abnormality, we need to do unaccustomed things without a backup system, because the system is designed to employ backup systems in ordinary situations. As a result, many of the accidents that occur are happening in these situations. As a Chronicler of Safety for operational rules, to prevent these accidents, I would like to have field site employees to understand the reasons and grounds for each procedure for times of abnormality, as there are reasons why we need to handle each one of the procedures in a certain way. I would like to pass this understanding on based on my experiences.



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