



hoods, trunk lids and lamps, from losing their functions. Bumpers are designed to plastically deform at the time of collision under these speeds, so as to absorb crash energy and protect automotive bodies. The newly revised standard of Insurance Institute for Highway Safety (IIHS) adopts new, low-speed collision tests which assume collision between vehicles having different heights<sup>5)</sup>. The IIHS is legally nonbinding, however, their ranking based on the repair cost incurred after collisions affects the sales of





As described above, aluminum alloy extrusions are widely used for automotive bumper systems. The properties required for automotive applications are expected to become more advanced with tightening regulations and the diversification of components used. To meet such requirement and to promote the use of aluminum alloy extrusions to automotive bumper systems, rapid developments are required for their materials, forming process and optimum structures. Kobe Steel will continue to strive for the design and development of bumper systems to contribute to automotive weight reduction.

## References

- 1) T. Aiura et al.: