

JRA Horse Racing and Equestrian Helmet Explanatory Diagrams

① Goggle fit provisions

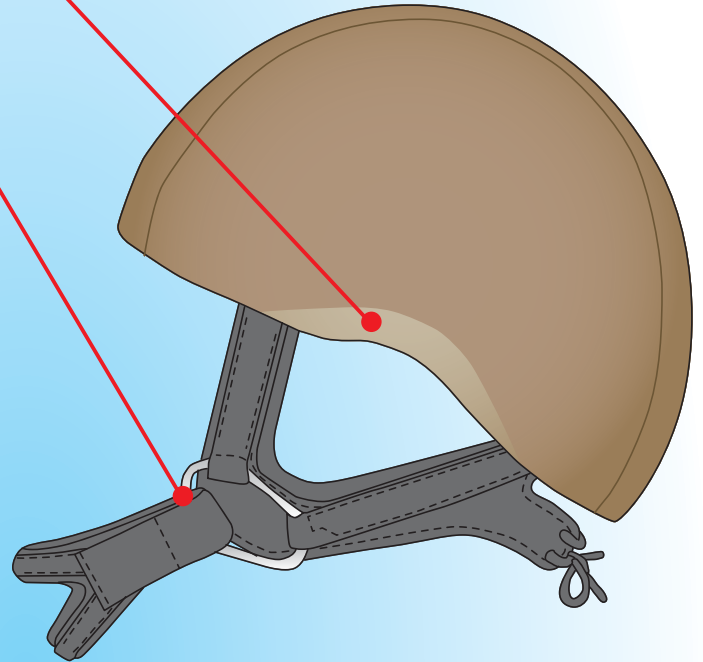
● We enhanced the closeness of the contact between goggle and wearer by making a diagonally cut surface centered on the edge area where the goggle band passes the side of the helmet shell.

② Secondary damage provisions

● In order to reduce secondary damage to the face area during a fall from a horse, we used hook-and-loop fasteners for the chinstrap attachment, and we used a special reshaped ring that eliminates sharp angles and that is structured to maintain the overall fit of the helmet.

③ Impact absorption testing

● Placing the helmet on a 4.1 kg dummy head, from a height of 300 cm we dropped it on an anvil that simulates race tracks at position 5 cm above the front, back and side edges. According to measurements taken by an accelerometer inside the head, the helmet maintained an average of 190 G's, which is far below the 300 G (impact acceleration value) level considered to cause damage to the brain. Incidentally, for a foreign-made hard-shell helmet, we recorded high values of 230 to 250 G's.



④ Stickiness and slippage provisions (pads)

● To reduce the discomfort experienced when the helmet is put on, we used a non-water-absorbent artificial leather that enables easy wiping. In addition, through the use of a hard urethane, we suppressed the helmet movement caused by vibration.

⑤ Support cushion

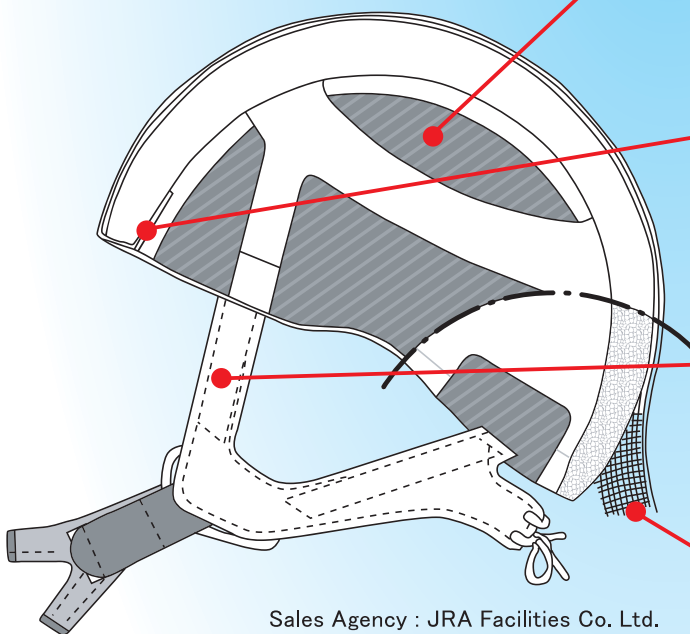
● In order to reduce the direct transmission to the head of an impact on the hard styrene, support cushions were placed between the internal pads. They also function as a kind of frame.

⑥ Stickiness provisions (earflaps)

● To reduce the discomfort experienced when the helmet is put on, we used a non-water-absorbent artificial leather that enables easy wiping.

⑦ Penetration-resistant mesh

● By securing an aramid fiber with superior penetration resistance between the shell and cover, we hindered interior penetration by hard objects and, at the same time, raised impact absorption performance.



Sales Agency : JRA Facilities Co. Ltd.
Manufacture : Arai Helmet Ltd.