1.6.2. **Equipment Checks**

The participants in F.I.B.T. competitions submit to checking their sleds and equipment by their signature on the International Licence and according to Art.1.7. The Jury may order checks on sleds and equipment on site at all F.I.B.T. competitions and can also have these checks carried out by a mobile laboratory on site or by a F.I.B.T.-approved laboratory according to the enclosed attachment.

*The sled is only opened by the athlete himself or by his trainer/mechanic.*

*The athlete must bring to the control all the tools necessary for the operation.*

*The sled must be disassembled in such a way that all the parts to be checked are easily visible.*

*For checks on runners, the athlete must state the material/alloy numbers relative to the steel of which the runners are made.*

Should an external check or examination prove a violation of the International Rules, the concerned National Federation is obliged to pay the costs.

3. **SPORT EQUIPMENTS**

3.1 **Principles**

Skeletons are sleds with 2 runners.

To propel the sled, only the pushing force of the skeleton driver and the force of gravity is permitted.

Devices to assist steering or braking are prohibited.

Protruding nuts and bolts which might cause injuries are prohibited.

Any hydraulic and pneumatic installations on the skeleton are prohibited.

The sled manufacturers are responsible for the construction of sleds that can withstand, without damage, the stress of repeated runs on the bob tracks.

For the purpose of the F.I.B.T., the term "steel" means an alloy of iron and carbon with an iron (Fe) content of more than 50%.

3.2 **Construction**

The contents of the text are binding: the dimensions indicated in the drawings, diagrams and figures are compulsory.

The **frame of the construction** and the **supporting body** must be constructed in steel. The **frame** must be configured as a horizontal plane in a single, continuous line. Max. tolerance 4 mm. Both longitudinal rails must consist of one continuous piece of steel with a minimum of 30/5 mm. Both cross rails must consist of one continuous piece of steel with a minimum of 25/3 mm. The corner joints of the frame rails must be firmly and rigidly joined together or to the runner supports. They may be welded or screwed with at least 2 screws per joint. The front cross rail has to be attached in the region of the runner supports. Max. tolerance from the front end of the supports to the cross rail is 8 cm. The rear cross rail has to be attached in the region of the runner supports. Max. tolerance from the back end of the supports to the cross rail is 3 cm.

3.3 **The base-plate** must be constructed in a single piece and must not be divided. It may also be constructed in plastics. The form of the base-plate must be convex all over. (Tolerance: max. allowable concavity in 30 cm = 3 mm)
The frame and the base-plate must be constructed in two separate parts. (Laminating the frame into the base-plate is not permitted). The two parts can be joined to each other by welding, cementing, riveting or screwing.

Exceptions:
- a) Openings for the runner blocks, runner bolts, and the runners.
- b) Opening for the support of the runner post holder / guide
- c) Opening for the bumper brackets
- d) On the front edge seen form above, within a distance of 8 cm from the front edge.

3.4 The **runner blocks and posts** must be welded to the runners.
The **runner supports** must be permanently joined to the sled’s frame.
The runners must be directly mounted to the runner-supports.
The **runner post guide / holder** may show a max. size of 25 mm width, 45 mm length.

3.5 The **supporting body** must be fixed to the frame above the base-plate.

3.6 No spring, rubber, rubber-like or energy absorbing material may be used for runner suspensions, frame and /or for all other parts of the sled.

Exceptions
- between linkage of supporting body and frame
- between linkage of base-plate to frame
- between fastening of additional weight
- padding of the supporting surface and supporting body

3.7 **Weight**

- Maximum weight of the sled and driver including equipment must not exceed 115 kg (Ladies: 92 kg).
- The weight of the sled must not be in excess of 43 kg (Ladies: 35 kg).
- If the weight of the sled and driver including equipment exceeds 115 kg (Ladies: 92 kg), the maximum weight of the sled alone must not exceed 33 kg (Ladies: 29 kg).
- Missing weight may be added by ballast on the sled.
Ballast must be securely fastened to the sled.
Ballast attached to the driver's body is prohibited.

3.8 **Dimensions**

- sled length: 80cm - 120cm
- sled height: 8cm - 20cm
- gauge from center to center of opposite runners: 34cm - 38cm

3.9 **Runners**

Each runner must consist of a solid homogenous piece of austenitic stainless steel, whereas the diameter of the steel must be consistently 16mm up to the runner blocks (minus measurements of 0.3mm are acceptable). The grooves in the runners must be fabricated in such a fashion that they do not damage the ice surface.
The steel must meet the following requirements:

a) minimum iron (Fe) content 50%

b) minimum chrome (Cr) content 12%

c) Maximum Ferrite / Martensite content 5%

d) Maximum hardness 330 HB (Brinell, sphere 10 mm, referring to 3.000 kgs., measured at a temperature of 20° C).

The depth of the grooves must not exceed 2mm calculated from the running surface.

3.10 Handles and Bumpers

The sled must be equipped with secure handles. They must be attached to the sled at both ends and covered with soft material. On both sides of the front part of the sled, particularly safe bumpers (bumper brackets) must be applied. Minimum distance outside edge of runner - outside edge of bracket = 7 cm. Minimum length of bumpers = 12 cm.

The front bumpers may exceed the padding of the supporting surface at its highest point by max.1.5 cm.

They have to jut out from the base-plate so far that control is possible at any time.

Bumpers (bumper brackets) which are equally as safe as those mentioned previously must be applied in proximity to the handles extending from the supporting body to the rear edge of the sled. Minimum distance outside edge of runner - outside edge of bumpers = 3.5 cm (measured in proximity to suspensions of rear runners). By installing the rear bumper in the direction of the sled's center, the overall size increases in a straight line to the front bumper. It must not jut out further than the front bumper. Minimum length of rear bumper = 8 cm.

All bumpers must be made of round steel. Minimum diameter = 12 mm. The back bumpers have to jut out from the base-plate at least 2 cm. In no way they may be taped or covered.

3.11 Push Elements

Any kind of mechanism assisting the start and the run of the sled is prohibited.

3.12 Fairings and Spoilers

Fairings and spoilers are prohibited. The base-plate is not considered as covering.

The padding of the supporting surface, measured in a horizontal line between the supporting body and the front part of the sled, must be flat. The width of the surface is given by the distance between the runners. The padding of the supporting surface, measured from the rear of the handles to the back edge of the sled, must be flat, too. The width
is given by the outside edges of the sled. Hollows or thickened parts are not allowed. The upper edge of the base-plate at the sides of the sled, measured in a horizontal line, must not exceed the upper front edge of the sled.

3.13 During official training or competitions no electronic, electrical, electronically activated or by waves activated components are allowed on the skeleton or athlete.
Skeleton Drawing – Supporting Body

Skeleton Drawing - Runner