

rolling of sheet (Plate)

Shelling boards of other thickness should be fired at along the direction of rolling.

2. The damages are considered to be acceptable, if the distance from the edge of the board to the edge of damage and also between neighbouring damages along the straight arc is not less than twice the calibre of the bullet.

For lesser distances acceptable damages are considered to be passed (see appendix on firing trials). For defeat damage, shots are to be repeated.

- 2.8. Hardness of shelling boards after additional artificial ageing to II stage should conform to the requirements of Table 6.

TABLE 6

Thickness of shelling board mm.	Hardness value BHN	Diameter of indentation mm.
8 - 20	131 - 156	5.20 - 4.80
21 - 32	137 - 163	5.10 - 4.70

- 2.9. Cracks, pin holes, corrosions, pit marks and slag and oxide inclusions are not allowed on the surfaces of sheets and plates.

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- 2.10. Dressing of surface defects are allowed to be carried out with scappers or abrasive wheels not bigger than No.50.
- 2.11. Within actual limits of allowance on faces and edges, defects caused by manufacturing process are allowed on the edges and faces of sheets with ensured possibilities of cutting rectangular sheet, plate of nominal dimensions.
- 2.12. Non flatness should not exceed:
- For sheets with thickness upto 10.5 - Requirements as per GOST 21631-76.
 - For plates with thickness from 11 to 20mm;
 - Along the long side 12mm
 - Along the short side 16mm
 - For plates with thickness above 20mm and upto 32mm
 - Along all the four sides 16mm;
- 2.13 Heat treatment of sheets and plates should be carried out as per conditions reproduced in TABLE 7

Table-7

Type of Heat treatment	Temperature °C	Thickness mm	Soaking time Min.
Hardening	470 ± 5	Upto 10	10 - 30
		10 - 20	30 - 75
		20 - 30	75 - 90
		30 - 50	90 - 120
		50 - 75	120 - 150
		75 - 100	150 - 180
		100 - 200	150 - 240
		Ageing I Stage	80 - 100
II STAGE	170		180

3. ACCEPTANCE RULES

3.1. Sheets and plates should be offered in batches for acceptance to the service technical inspection and to representative of the customer in accordance with the requirements of the present standard.

Every batch should be offered by the supplier with accompanying documents and test records.

3.2. Batches should consist of sheets and plates of the same thicknesses and widths, rolled out from ingots of same melting and heat treated in the same charge.

3.3. Every melting of alloy is subjected to chemical analysis on samples picked out from liquid metal at the time of making ingots.

3.4. Every sheet and plate is subjected to checking of dimensions, non flatness and surface conditions.

3.5. Testing of mechanical properties in ready for supplies condition is carried out:

- During tensile tests - On one sample cut across the direction of rolling from one sheet or plate of every charge;
- During impact strength tests and hardness checking - on template (sample), cut from one sheet or plate of every charge;

Impact strength is determined on three samples, cut across the direction of rolling.

3.6. If unsatisfactory results are obtained during testing

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of mechanical properties, it is allowed to carry out retesting on twice the number of samples from each sheet or plate showing unsatisfactory results.

Results from retesting are considered final.

Repeated heat treatment with subsequent testings in the same order is allowed.

3.7. Testing of hardness and bullet proof properties is carried out on two shelling boards (templates) of size $500 \pm 50 \times 400 \pm 50$ mm (Dimension 500mm along the direction of rolling) selected from every batch according to the choice of the customer's representative.

3.8. If the results of hardness testing are unsatisfactory, repeated heat treatment and hardness testing may be carried out on the same shelling boards (templates) or on shelling boards (templates) selected from the same sheets and plates.

Changing the shelling boards for firing tests should be done only with the permission of customer's representative

4. METHODS OF CHECKING.

4.1. Chemical composition of alloy is determined in accordance with the existing standards on methods of chemical analysis, alloying elements and impurities in castings and wrought aluminium alloys.

4.2. Dimensions are measured with measuring instruments

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