



STEEL, SHEET, BORON TREATED, HIGH STRENGTH

WSB-M1A322-A1

1. SCOPE

The material defined by this specification is a fully killed, fine grained high strength boron steel.

2. APPLICATION

This specification was released originally for material used in door intrusion beams where a high strength to weight ratio is required. High strength and toughness is obtained during the combined hot forming/die quenching operation, see 4.2.

Caution: Due to the hardenability response of this material, individual welding schedules must be developed for each application.

3. REQUIREMENTS

3.1 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.2 CHEMICAL COMPOSITION

The percentages given are heat or cast (ladle) analysis:

C	0.20 - 0.25
Mn	1.00 - 1.30
P	0.03 max
S	0.025 max
Si	0.20 - 0.35
Cr	0.15 - 0.25
B	0.0015 - 0.005

3.3 FORMABILITY

The quality level of steel supplied to fabricate a specific component is to be negotiated between the hot forming activity and the steel supplier. Acceptance of subsequent orders by the steel supplier for a given component at the agreed upon quality level implies that all steel supplied will be of a comparable quality level and will form that part satisfactorily as defined by the hot forming activity.

4. GENERAL INFORMATION

The information below is provided for clarification and assistance in meeting the requirements of this specification.

Date	Action	Revisions
2003 06 24	Revised	Rev para 4.2 K. Thurgood
2002 07 31	Revised	Updated and renumbered
1992 03 31	NB00E10043054172	Released J. Nelson NA AON Riley EAO



4.1 INITIAL SUPPLIER APPROVAL

For initial approval, the supplier must furnish the following information for each grade.

- . A plan detailing how each requirement of para 3 will be controlled on a continuing production basis.
- . Test results from a typical production sample for the requirements outlined in para 3.

Upon approval, the material will be added to the Engineering Material Approved Source List.

4.2 COMPONENT PROPERTIES

This material gives rise to high strength and toughness during the combined hot forming/die quenching operation.

Typical component properties are as follows:

Ultimate Tensile Strength	1500 MPa
Yield Strength	1100 MPa
Elongation (A5)	9%