

## RAW MATERIALS / FERROUS

FNHA-2-A-202.00

**CARBON STEEL, COLD-ROLLED, DRAWING QUALITY, SPECIAL KILLED, ASTM A620 STRIP****1. SCOPE**

1.1 This Material Specification includes cold-rolled carbon steel strip of drawing quality, special killed in coils or cut lengths.

1.2 This material is intended for fabricating parts requiring severe drawing or forming, or where essential freedom for aging, is required.

**2. DRAWING SPECIFICATION**

2.1 Versatile only: Material Code 121

2.2 NH only: CR Strip ASTM A620

**3. RELATED SPECIFICATIONS****3.1 REFERENCE STANDARDS**

ASTM A620/A620M: Steel Sheet, Carbon, Cold-Rolled, Drawing Quality, Special Killed.

ASTM A568/A568M: General Requirements for Steel, Carbon and High Strength Low-Alloy Sheet and Cold-Rolled Sheet.

86050115(FNHA-2-A-026.00): General Requirements, Sheet and Strip.

3.2 This standard replaces the following company standard:

Versatile Standard

MS - 602

**4. CHEMICAL REQUIREMENTS**

4.1 The cast or heat analysis of the steel shall conform to the requirements listed in Table 1.

**TABLE 1: CHEMICAL REQUIREMENTS**

| ELEMENT         | COMPOSITION, Max % |
|-----------------|--------------------|
| Carbon, max     | 0.10               |
| Manganese, max  | 0.50               |
| Phosphorus, max | 0.025              |
| Sulfur, max     | 0.035              |

4.2 If aluminum is used as the deoxidizing agent, the aluminum content total by product analysis is usually in excess of 0.10%.

**5. PHYSICAL REQUIREMENTS**

5.1 Special killed steel shall be essentially nonaging. It shall be free of stretcher or flute strains, and shall not suffer loss of ductility with elapsed time. ALL MATERIAL SUPPLIED TO THIS SPECIFICATION SHALL BE SUITABLY TEMPER ROLLED AFTER ANNEALING TO PREVENT AGING.

5.2 Material supplied to this specification shall have a matte (dull) finish, shall be oiled, and have cut edges.

5.3 DQSK sheet shall be produced for special killed steel. It is normally produced from aluminum killed steel but may be otherwise deoxidized provided the material is capable of meeting the specified requirements.

|            |         |     |         |        |                                                                                                                                                                                                        |                     |                           |
|------------|---------|-----|---------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------|
|            |         |     |         |        | NAME                                                                                                                                                                                                   | STD ASTM A620 CR ST |                           |
|            |         |     |         |        |  <b>NEW HOLLAND</b>                                                                                                 |                     | ENGINEERING SPECIFICATION |
|            |         |     |         |        |                                                                                                                                                                                                        |                     | FRAME 1 OF 2              |
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**RAW MATERIALS / FERROUS****FNHA-2-A-202.00****6. MECHANICAL REQUIREMENTS**

6.1 DQSK sheet shall produce identified parts within a properly established breakage allowance, see Standard 86050115 (FNHA 2-A-026.00), General Requirements for Steel, Sheet & Strip.

**7. DIMENSIONS AND TOLERANCES**

Tolerances for thickness, width and length dimensions are given in standard 86050115 (FNHA 2-A-026.00), General Requirements for Steel, Sheet & Strip.

**8. DESIGN APPLICATIONS**

8.1 DQSK should be used for parts that undergo severe drawing or forming, for example, sheet metal formed parts with tight 90 degree bends, sheave halves, cups, etc.

8.2 When the age hardening allowance is minimal for certain forming operations, DQSK should be considered.

**9. AVAILABLE SHAPES**

DQSK is available in strip and coil.

**10. QUALITY ASSURANCE**

10.1 Material supplied to this specification shall also meet the appropriate sections in standard 86050115 (FNHA 2-A-026.00), General Requirements for Steel, Sheet & Strip.

10.2 The Quality Assurance Department shall monitor parts made to this specification to ensure that the supplied material conforms to the properly established breakage allowance as indicated in Section 5.1.

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