amhoist AMERICAN HOIST & DERR. . COMPANY ST. PAUL, MINNESOTA

HARRIS
Harris
Press & Shear Division
63 South Robert Street
St. Paul, Minnesota 55107

PROPOSAL SPECIFICATION: 800114

AUTOMATIC BALER-SHEAR MODEL: HARRIS 500

GENERAL LAYOUT DRAWING: 3A-7737

APPLICATION: Auto scrap--miscellaneous No. 2 and selected No. 1 less than 34" wide

A CAPACITY AND RATING:

A1 HOPPER LOADING AREA: 80" wide x 240" long

A2 SHEAR BOX DIMENSIONS:

A2.1 OPEN FOR CHARGING: 90" wide x 28" deep x 240" long

A2.2 CLOSED FOR SHEARING: 34" wide x 24" deep x 240" long

A3 COMPRESSING CAPACITY: One auto chassis complete, bumper, front and rear end attached.

A4 SHEAR THROAT: 36" wide x 24" high

A5 SHEARING FORCE: 503 tons

A6 SHEARING CAPACITY: 2" x 34" mild steel plate or equal

A7 CUTS PER MINUTE: 4 (full stroke)
5 1/2 (short stroke)

B COMPONENTS:

B1 ELECTRIC MOTORS:

B1.1 MAIN SYSTEM: Two (2) 100 HP, 1750 RPM, 230/460 volt, 3ø, 60 Hertz, protected enclosure.

B1.2 COOLING SYSTEM: One (1) 7 1/2 HP, 3500 RPM, 230/460 volt, 3ø, 60 Hertz, protected enclosure.

B2 ELECTRIC CONTROL SYSTEM:

B2.1 One (1) NEMA XII control panel to include across-the-line motor starters for 440 to 600 volt power with overload protection, circuit breaker, control circuit transformer and cycle control relays wired to terminal strips.

B2.2 One (1) operator's station enclosure to include oil tight control switches and signal lights, wired to terminal strips.

2934567

B COMPONENTS: (Continued)

B3 HYDRAULIC SYSTEM:

B3.1	MAIN PUMPS:	Two (2) 90 GPM at 3200 p.s.i. Two (2) 90 GPM at 2400 p.s.i.
B3.2	PILOT PUMP:	One (1) 12 GPM at 700 p.s.i.
B3.3	FILTER PUMP:	One (1) 30 GPM at 50 p.s.i.
B3.4	COOLING PUMP:	One (1) 120 GPM at 50 p.s.i.

B3.5 VALVES: Harris or equal

B3.5.1 Individual relief valves protect each pump from overload pressure.

B3.5.2 Directional valves are electrically controlled and hydraulically operated.

B3.6 CYLINDERS: Double acting all places

B3.6.1	SHEAR CYLINDER:	One (1) 20" bore, 503 tons
B3.6.2	FEED CYLINDER:	One (1) 8" bore, 60 tons
B3.6.3	BOX CYLINDER:	Three (3) 7" bore, 138 tons, each side
B3.6.4	HOPPER CYLINDER:	One (1) 6" bore, 34 tons

B4 FILTERING AND COOLING SYSTEM:

B4.1 Filtering is by combination of screens and replaceable cartridge type micronic filters.

B4.2 Circulation through filter and heat exchanger provides maximum efficiency.

B4.3 An oil to air heat exchanger is standard.

B5 LUBRICATING SYSTEM:

B5.1 Automatic force feed lubricant to crosshead ways.

C OPERATION:

C1 Scrap for each charge is normally loaded on the hopper during the shearing phase.

C2 Scrap is charged into the open compression box direct or from the hopper. The box is manually operated to compress and confine the scrap. The feed ram positions the charge for the first cut and the shear is placed in the automatic mode or operated manually.

C OPERATION: (Continued)

C3 In the automatic mode, the crosshead makes the cutting stroke, retracts and the feed ram moves the scrap forward to a preadjusted length beyond the knives for the next cut. This automatic cycle repeats until the box is empty, then the operator retracts the feed ram manually and the box is opened manually to receive the next charge of scrap.

D CONSTRUCTION:

D1 Major sub-assemblies are heavy plate and structural weldments, stress relieved before machining to design dimensions.

D2 Final assembly is bolted.

D3 KNIVES:

D3.1 One set of knives is shipped with machine and these knives are keyed in hardened knife seats.

D3.2 All four (4) knife edges are usable.

D3.3 Bed knife: Horizontal

D3.4 Crosshead knife: 7 1/2° guillotine angle

D4 Crosshead gib adjustment compensates for knife and slide surface wear.

D5 Shear throat is lined with abrasion resistant plate.

D6 HOPPER: Pan type to handle auto frame or loose No. 2 scrap.

D7 All pipe is electrically welded and securely anchored.

D8 Pipe flanges are steel, bolted type, with "O" ring gaskets.

D9 Each Harris machine is completely assembled, operated and tested before shipment.

D10 Standard paint is one coat machinery enamel over primer coat.

D11 GROSS WEIGHT: 75 tons, approx.

E GENERAL:

E1 Layout and foundation prints show above grade dimensions and conditions. Below grade soil conditions, piers, piling, footings and associated components are matters of local determination for which Harris can accept no responsibility. Machine is designed for flat slab installation.

E2 Harris technical services are available on a free advisory basis to assist in determining the location and material flow conditions best suited to utilize the high production of Harris equipment.

E GENERAL: (Continued)

E3 This proposal also includes the services of a qualified installation specialist for 3 eight-hour working days. He will supervise the unloading and assembling of the shear, place the shear in operation and instruct your operator in recommended operating and maintenance procedures. (Transportation and sustenance outside the continental United States is for the purchaser's account.)

F EXPENSES ASSUMED BY THE PURCHASER TO COMPLETE THE MACHINE INSTALLATION:

F1 Railroad freight from factory to destination.

F2 Preparation of foundation.

F3 Unloading and assembling shear.

F4 Wiring from power source to shear electric control panel and from control panel to machine junction boxes and operator's pushbutton station.

F5 Supply main disconnect switch.

F6 Furnishing all fuses.

F7 Making connections to filter and cooler.

F8 Furnishing approximately 1000 gallons of hydraulic oil for the hydraulic system (based on standard power unit location).

G WARRANTY:

G1 The seller guarantees its product for the period of six months after date of delivery f.o.b. Cordele, Georgia, against defects in material and workmanship for use within the capacity defined in Section A. No guarantee shall exist if unauthorized alterations have been made by the owner or user, or stated capabilities of machine exceeded. In case any material or workmanship shall prove defective, the seller's liability will be limited to repairing any defect in workmanship or replacing defective part packaged for shipment f.o.b. Cordele, Georgia. All outside purchased equipment and accessories are guaranteed only to the extent of the original manufacturer's guarantee, shear blades included, no exceptions. Manufacturer reserves the right to change the design and construction of the product when in their opinion it represents an improvement of any part or the entire product. Seller shall have no liability or responsibility for consequential damages of any kind including damage or injury to persons or property arising out of use or operation of said article.