FINAL

MARQUIP INC.

PROPOSAL

Marquip In-Line Sheeter
Proposal Number P22SP - 70271
Revision C

To:

June 7, 1993

By:

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1.0 GENERAL SPECIFICATIONS, IN-LINE SHEETER

1.1 Process

- 1.1.1 Sheeter Type: In-Line
- 1.1.2 Operating Mode: Continuous
- 1.1.3 Machine Configuration: Duplex
- 1.1.4 Number of Running Webs: One

1.2 Power Requirements

- 1.2.1 Electrical: 575/3/60
- 1.2.2 Air: 80 psi
- 1.2.3 Controls: By Marquip, including PLCs and all required motor starters, transformers and drives.
- 1.2.4 Control Enclosure temperature specification: Maximum 104°F (40°C) ambient temperature outside control enclosures.
- 1.2.5 Wiring code: USA

1.3 Speed and Rate

- 1.3.1 Maximum board machine speed: 300 FPM
- 1.3.2 Slitter Change: Manual
- 1.3.3 Length Change: Maximum speed next cut.

2.0 CUSTOMERS MATERIALS SPECIFICATIONS

2.1 Customer's Material:

- 2.1.1 Type: Recycled clay coated board
- 2.1.2 Caliper: 12 to 40 point
- 2.1.3 Caliper Variation: Less the 5% deviation in caliper across web width.
- 2.1.4 Basis Weight: 52 - 140 lb/1000 ft^2
- 2.1.5 Moisture Content: 7 - 10% normal
- 2.1.6 Density of Material: 3.5 - 4.4 lbs/caliper

3.0 OPERATION DESCRIPTION AND SPECIFICATIONS

3.1 Slitting Parameters

- 3.1.1 Slitter Type: Manual duplex
- 3.1.2 Number of Slitting Stations: Two
- 3.1.3 Number of Outs: Five
- 3.1.4 Minimum And Maximum Width of Outs: 16" to 90"
- 3.1.5 Edge Trim Required: Yes
- 3.1.6 Diverter Forks: Yes
- 3.1.7 Options: Web cleaner

3.2 Cutting Parameter

- 3.2.1 Number of Cutting Levels: Two
- 3.2.2 Cut Accuracy: $\pm$ .030" during steady run
- 3.2.3 Minimum and Maximum sheet length: 17" to 65"
- 3.2.4 Model of Knife: Series 40 (98" width)
- 3.2.5 Options: Out feed take off conveyors

4.0 OPERATIONAL DESCRIPTION - MARQUIP MANUAL OR DUAL STATION SLITTER

The Marquip Single or Dual station slitter incorporates standard Tidland tooling and heads that allows for automatic order change. The operator sets up one station while the other station is slitting. At an order change, the engaged slitting station is retracted and the other station set up for the next order is plunged into the board line.

5.0 OPERATIONAL DESCRIPTION - DIRECT DRIVE CUTOFF KNIFE SYSTEM

A continuous web of board enters a double level knife system from the upstream paper machine.

A pull roll in the knife pulls the web from the paper machine and feeds it to the knife cylinders where it is cut to length. The amount of web fed into the knife is measured just upstream of the pull roll by a web resolver. The knife is preprogrammed to cut sheets to a specific length and can change to a new cut length within the next cut without stopping.

Immediately downstream of the knife mechanism is a tape belt conveyor which power the cut sheet out of the knife. The tape belt conveyor runs slightly faster than the pull roll so the web is tensioned prior to the cut. Also the speed differential causes a slight gap between the sheets as they exit the knife.

6.0 OPERATION DESCRIPTION - SHEETER CELL CONTROLLER

The Operator Interface Computer (OIC) of the Sheeter Cell Controller (SCC) is used for setup information entry. The operator enters order set-up information, in English decimal, English fractional, or metric units.

The Operator Interface Computer (OIC) will permit advance entry of up to 50 setups. Individual setups that have been programmed can be recalled and modified. Web support fork positions are computed from entered setup information and outputs to individual forks are provided. A port for communication with a plant computer and a printer for printing entered setup data is also available as an option.

History information for the last 50 orders is provided, along with shift production totals for the previous shifts. Shift notes can also be entered that can be used by the operator to inform the maintenance department or next shift of possible operational problems or general maintenance requirements that need to be carried out.

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SPEED VS. SHEET LENGTH
SPEED (FPM) MODEL III-98"
SERIES 40

SHEET LENGTH (INCHES)	FPM
17	194
18	234
19	274
20	314
21	357
22	404
23	459
24	524
25	597
26	676
27	758
28	851
29	947
30	1043
31	1100
33	1062
35	982
37	915
38	888
39	866
42	820
46	786
52	771
60	771
66	789
74	821
94	840

QUOTATION
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Marquip In-Line Sheeter includes:

- Duplex Manual Slitter Station with five-out slitting capability, automatic fork table and controls
- Double Level Dual Rotary Direct Drive Cutoff Knife Series 40
- Manual take-off tape belt conveyor

Total	$ 643,000
Rock-Tenn 9% Discount	$ 57,870
NET SALES PRICE	$ 585,130
** Fixed price installation supervision and training (Not to exceed 52 man-days)	$ 48,000
Optional Web cleaner (90" web with)	$ 38,500
Recommended spare parts	$ 28,000
Total Net Sales Price	**$ 699,630**

** Fixed Price Field Service is for technical supervision, troubleshooting and operator training. Customer to supply mechanics, electricians, and all tools. Price does not include the removal of any old equipment, main power runs, concrete work, or unloading of equipment. Operator training assumes three crews will be trained (3 shifts per day) over 5-day period. Any additional crew training will be at additional cost to customer.

TERMS AND CONDITIONS:

Standard Terms:
30% Down with order ($209,889)
60% Due at shipment ($419,778)
10% 30 days after start-up, not to exceed 90 days from shipment ($69,963)

F.O.B. Madison, Wisconsin

Estimated delivery date: September 2, 1993

Marquip will reduce the price of this sheeter by $750 per day for each day the delivery is delayed after September 12, 1993, up to a maximum penalty of five percent of the order.

reserves the right to cancel this order with no penalty to them, thirty days after September 2, 1993, if the sheeter has not been delivered by that date and feels that it will not be delivered in the near future.

* Prices are in US Dollars and are valid for 60 days after the date of proposal. This offer shall become a legal and valid Marquip Inc. contract only after signing by buyer and acceptance by Marquip Inc. officials in the State of Wisconsin, USA.