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Machine Stress Rated Lumber Production for 2003 Tops Two Billion Board Feet! by Stewart Garden

MSR lumber production was on the rise in 2002 and 2003 thanks to the increased demand of high performance lumber by component manufacturers.

The steady growth in demand for machine stress rated (MSR) and machine evaluated lumber (MEL) has led to record production levels of more than two billion board feet for 2003. This milestone was communicated with the release of the 2003 Production Survey in Vancouver, Canada earlier this year at the annual MSR Lumber Producers Council workshop.

The increase in MSR production volume means greater availability and potential for end users to move from visually graded lumber to MSR. Component manufacturers are able to count on regular access to preferred species and grades to meet their manufacturing needs throughout North America.

Species	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
DFL	125.4	123.1	133.6	134.3	176.6	159.0	147.0	146.7	147.7	162.9
HF	39.7	34.8	44.2	60.5	66.7	67.0	57.0	63.9	62.6	56.2
SPF	568.1	652.5	714.9	758.1	889.4	954.7	1284.5	1229.7	1492.4	1497.9
SYP	115.7	111.8	116.1	138.9	154.1	201.1	185.7	226.6	271.1	290.7
Total	848.9	922.2	1008.8	1091.8	1286.8	1381.8	1674.2	1666.9	1973.8	2007.7

Table 1. Total MSR Production Volume by Species (million board feet)

The majority of North American MSR lumber producers report their annual production volume to the council and the results of the survey are considered to be the most complete available. The council is one of the few industry associations representing all lumber manufacturing regions of North America.

Inclusion of the various MSR grades in component design software has helped in the growth of the product. Design values for the different species and grades included in software packages allow truss technicians to select the grades that most efficiently and economically meet their needs.

New and improved technologies from MSR equipment manufacturers have been developed in recent years to efficiently extract the strongest lumber from production. The speed and accuracy of machine grading equipment has been greatly improved to match and compliment the development of sawmill technology such as grade optimizers and high-speed production equipment. Grading equipment is capable of keeping up with production in the range of 2,500 to 3,000 lineal feet per minute. This has allowed sawmills to increase MSR production volumes and decrease the pay back time for capital investments.

Additional factors that have led to the steady increase in production and demand include:

1. More end users are requiring high performance lumber with more accurate design values.
2. Engineered component systems are pushing their structural members close to the limit of their design capacity.
3. Technicians have the need for consistent strength and appearance in all applications.

The 2003 survey shows the grades with the largest production volume are 1650Fb 1.5E and 2100Fb 1.8E. These grades make up over two-thirds of North American production.

The marketplace has demanded a higher visual grade of MSR over the past few years and several grading agencies have introduced stamps that will indicate tighter visual characteristics such as #1 wane. The responsiveness of the industry in meeting customer needs has helped in the growth of MSR lumber.

Spruce-Pine-Fir from the United States and Canada continues to be the largest volume with approximately 75 percent of North American output. Southern Yellow Pine, Douglas Fir-Larch and Hem-Fir follow with 14 percent, eight percent and three percent respectively.

The recent growth in lumber manufacturing in Europe has led to their evaluation of opportunities to add value to wood products. MSR has been a clear choice in many cases and MSR production is increasing internationally. Stora Enso has recently begun to bring a small volume of their MSR production from Europe into the United States and this has fit well with their international programs which include European and Asian customers.

All indications are that MSR lumber production will continue to grow. The expansion of the component industry in North America along with the popularity of engineered wood will help drive this growth. Equipment producers indicate sales of their grading equipment are steady and show no sign of slowing. MSR lumber will continue to lead the way as a value added product for the lumber industry.

Size	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
2x3	11.9	21.0	20.9	33.0	48.2	57.8	116.2	58.5	71.8	83.7
2x4	505.3	546.7	564.5	611.3	810.8	840.0	1042.1	1029.3	1200.2	1215.6
2x5	0.3	NA ¹	NA ¹	2.9	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹
2x6	239.0	249.3	247.8	277.7	319.8	349.9	395.9	433.4	525.4	519.8
2x8	43.1	45.4	32.7	38.5	61.6	68.1	69.9	91.3	108.3	111.3
2x10	21.4	19.5	13.1	13.9	21.5	35.7	31.7	39.5	52.9	56.9
2x12	4.9	3.3	4.3	4.5	8.3	9.3	9.7	10.0	11.6	16.8
Other	23.0	37.1	125.5	110.0	16.7	21.0	NA ¹	NA ¹	NA ¹	NA ¹
Total	848.9	922.2	1008.8	1091.8	1286.9	1381.8	1674.2	1666.9	1973.8	2007.7

Table 2. Total MSR Production Volume by Size (million board feet) ¹These data were combined into the "Other" category

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The MSR Production Survey is compiled on a confidential basis by Joratek Enterprises under contract to the MSR Lumber Producers Council (www.msrlumber.org). The proprietary nature of the survey requires that production data from individual respondents is not published, only the combined volumes of each species, grade and width. Neither Joratek nor the MSR Lumber Producers Council is responsible for the accuracy of the data supplied for survey.

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