I. COVER STORY

The 1996 Outlook For Stainless Steel Use Is Good. Not Great, But Good

PURCHASING Magazine is projecting a 3% rise in the use of stainless steel this year. Annual consumption growth averaged 6.5% between 1990 and 1995, that's why the outlook is good, but not great. After all, global stainless steel markets - and price levels are clearly weaker thus far in 1996 than they were in 1995. Still, most market analyses tend to agree that the market malaise will be short-lived because it has been caused by bloated inventory at the distribution level - and not a nosedive in demand at the end-user level.

Stainless steel mill execs we've talked to agree with Art Aronson, the CEO of Allegheny Ludlum Corp., who says "Stainless steel demand will recover once the current inventory reduction phase has passed." That's probably true for several related reasons. First, stainless steel demand is driven by capital goods manufacture, and that's still holding up. Second, at least half of all stainless is supplied to manufacturing end users by distributors. Third, service centers - who have been building stainless stockpiles for several years - let inventories get out of control in 1995.

And, note that excessively high stocks aren't just a North American phenomenon. "Overly high inventories were built up by service centers last summer, so the reduction that began in the autumn of 1995 will continue through May," suggests Jyrki Juusela, the CEO of Outokumpu, the Finnish stainless steel maker. He adds "That because end-use consumption has remained fairly good, market growth should resume by mid-year."

Francis Mer, the CEO of French steel giant Usinor Sacilor, tells PURCHASING he also believes that "European, Asian, and American stainless steel destocking by distributors is probably in its final phase because end-use consumption of stainless steel still is relatively high."

Still, PURCHASING Magazine's market research suggests that 1996 will be the fourth consecutive year of growth in use of stainless and specialty steels. However, after three years of explosive double-digit sales growth, our research also tends to support Dick Santoro's view that 1996 and 1997 will be "a period of slower growth" for stainless use. Santoro is the VP of Sales and Marketing at specialty steel bar maker Carpenter Technology, in Reading, Pa.

He says that "Underlying stainless steel consumption remains fairly healthy" because manufacturing productivity gains have helped American industry become more competitive in world markets. He also
expects to see stainless industry shipments to pick up in the second half once the market closes out its inventory liquidation phase.

This decade, the annual average U.S. use of stainless steel has been 2.1 million tons. In the 1980s, annual average use was 1.4 million tons. This proves that "The underlying demand for stainless steel has been growing faster than economic activity as a whole," explains analyst Charles Bradford at UBS Securities. This is unusual for a metal, he says. But it's because consumers' demands for long-life durability and quality have overpowered manufacturers' inclinations to opt for cheaper materials solutions. "Consumers are demanding longer-lasting products," notes Bradford. "So, there's plenty of room for continued growth in stainless steel demand."

But the market simply can't sustain the double-digit growth rates of the past three years. That's why most market analysts expect to see U.S. stainless and specialty steel use to grow in excess of 2.6 million tons this year while overall steel use may slip. Analyst Tom Abrams at Oppenheimer & Co. equates the latest steel demand cycle to a baseball game. "While it's the top of the eighth inning for carbon and alloy steels," he says, "it's more like the bottom of a fifth inning for stainless steels." In other words, the demand from the key end uses of stainless steels - capital goods - always cyclically lag demand from the key end uses of carbon steels - consumer goods.

Lately, though, there have been many new uses for stainless steels as replacements for high-carbon, low-alloy, and galvanized steels. New acid-resistant stainless grades are going into machinery and parts for pulp and paper production and processing. New construction uses for water-resistant stainless grades include concrete reinforcements, fasteners, hooks, wall ties, and even bridge parts. There also have been new uses found for food processing and heavy-duty modular cooking equipment. New types of pumps, drilling, and waterjet-cutting machinery are using stainless steel as well. Against this background, let's look at specific product groups, starting with sheet and strip.

Stainless sheet and strip consumption shows no sign of deteriorating. These grades account for 70% of all stainless use, and 55% of all specialty steel use. Added supply from North American mills last year offset a 7% drop in imports. Estimated use rose 10% last year to a record of just under 1.5 million tons. This year's use will be just over 1.5 million tons.

Stainless plate and heavy structurals use rose in 1995 by 20%, twice what was expected, to a level in excess of 260,000 tons. Expect almost the same usage level in 1996. Apparent consumption is benefiting from orders for heavy machinery and such specialty equipment as flue gas desulfurization scrubbers and other air and water pollution-control components.

Specialty bar, rod, and wire consumption was unexpectedly high in excess of 310,000 tons last year. It should be close to that level this year, if not slightly higher. Remember that leadtimes from stainless bar mills like CarTech remain extended. That's because domestic bar mills are somewhat capacity-constrained because imports have slipped by 10%. Atof that, bar demand from parts makers who support equipment for industrial, commercial, and construction markets has been growing steadily.

Rod and wire imports, on the other hand, have maintained a high 55% rate of market penetration. While wire use didn't grow all that much last year, demand could take off this year.

Then there's tool & die steel, where use last year was reported in excess of 120,000 tons - which may be the cyclical peak. Mills boosted home-market shipments by 25% while imports skyrocketed by 45%. The 1994 and 1995 surge in capital equipment and machinery production will ease this year though, so sales to tool and die makers will decline. Upshot: Use will rise slightly to 125,000 tons.

Electrical steel use was a solid 420,000 tons last year as imports exploded 20% to support a 10% increase in end-user demand. Use of this steel - used in motors, generators, and transformers - will go to around 430,000 tons or so.

Conventional wisdom says stainless steel is the principal steel product used mostly in corrosive or elevated temperature environments. But, in truth, less than 30-percent of end-use applications can be identified, according to Brian Leslie, Director of Market Development for the Specialty Steel Industry of North America trade group. And that's allowed specialty steel producers to move into two major steel-consuming markets - building construction and infrastructure construction.

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II. METAL CHIPS

Construction Has A Target Of Opportunity For Suppliers Stainless And Other Specialty Steels

Construction is one of the steadiest steel markets in North America. This year's total spending on construction will grow by about 7% and come close to $325 billion. After a one-year slowdown, single-family housing construction will grow by a solid 3%. A similar growth rate is forecast for such multifamily spending on hotels, apartments, and condominiums. And a much stronger 7.5% increase is forecast for such nonresidential buildings as factories and shopping malls, plus bridge and highway infrastructure. We'll also update the continued growth in the use of steel in the housing sector.

For much of the past two years, the construction industry has celebrated the return of growth. Having survived the dark days of the early 1990s, contractors have savored the recovery of apartment and retail properties, followed by offices and hotels. Apartment construction, for example, is up 70% since 1993. Single-family housing has had its ups and downs, but overall this building sector has been healthy. In fact, a stronger 1996 housing market should help pick up the slack should retail construction begin to slip. And, with office occupancy and rents improving, 1996 will mark the return of one of the recovery high-rise office projects.

This generally good news for construction stems largely from the continued decline of interest rates. It was the lower rates that sparked home-building in the second half of 1995. David Seiders, Chief Economist for the National Association of Home Builders, reckons that moderate economic growth will lead to even lower mortgage rates in 1996. That should nudge multi-family and single-family housing starts up about 3-percent, to nearly 1.4 million units. A key plus is that the days of speculative boom and bust are gone. Bruce Karatz, Chairman of Los Angeles-based Kaufman & Broad home construction corporation, notes that "People again are looking at houses as shelter rather than as an investment strategy." "Frankly," he adds, "that's pretty healthy."

Apartment construction also continues to pick up steam. According to the homebuilders association, construction will begin on 290,000 apartments in 1996 - up a bit from last year's 274,000. While that is still less than half the 1985 frenzied peak of nearly 670,000 units, industry pros are happy. Economist Seiders at the Builders Association has issued a "quiet and boring" forecast for housing and construction starts.

But, "Boring is good," says Seiders, adding "There's nothing bad in a solid, unexplosive year of home building activity." And remember that the U.S. activity in housing may translate into a better year for residential construction north of the border.

Canada's building activity fell almost 8% last year, mostly because Canadian housing starts fell 28% to about 111,000 units. However, very strong housing construction was reported in the final months of last year. A new report from the Canada Mortgage and Housing Corp. says this activity could carry through most of 1996 as well. And, according to Mark Zandi, Chief Economist at Regional Financial Associates in West Chester, Pennsylvania, "Thanks to a steady decline in mortgage rates, housing is probably the strongest sector of the North American economy right now."

In fact, the owners of several hundred construction firms, responding to a new Dun & Bradstreet survey, just predicted a moderate upturn in activity in coming months. These construction firm operators note that current order books are much stronger than in previous months. This is important because although housing makes up less than 5% of the overall North American economy, it spurs activity in such other areas as construction materials and durable goods.

Just look at steel. Steel deliveries to construction and contractor products account for at least 18-percent of all North American home-market shipments. Probably more. Recent market studies now suggest that a full third of all steel consumed in the U.S. is used in some form of construction. Statistical research shows that, in the past 12 months, the U.S. and Canadian construction market absorbed something like 25 million tons of steel. Contractors bought something like 13 million tons of structural bar grades, concrete-reinforcing bars, and structural pipe. Researchers think almost that much sheet and plate also went into construction-related fabrication. So, looking at the optimistic 1996 construction outlook, market analysts foresee even stronger steel use by the construction sector.

It should be noted that nonresidential construction has been running against the grain of the overall economy. In the early stages of this recovery, nonresidential construction actually declined. Now, with the recovery mature and the economy slowing, there has been an acceleration of nonresidential structures. One key reason is that excess office space has been absorbed. A key reason: The explosive growth of high-technology companies. Upshot: Players in the office market expect 1996 to be a banner year.

Also note that such mega-merchants as Wal-Mart Stores and Circuit City Stores continue to expand aggressively - which is bolstering retail construction. Retailers and shopping-center developers added about 260 million square feet in 1995, just slightly off the one-year peak of the mid-'80s. Such seasoned forecasters as McGraw-Hill's F.W. Dodge unit now say retail construction could slip as much as 10-percent this year. But that's to avoid a repeat of the overbuilding binge of the 1980s, and not a sign that retail construction is collapsing.
III. Metal Chips Extra

Let's Take A Peek At The Metal Buildings Market

Metal buildings used to be mainly for factories and warehouses. Now, they're used for offices, showrooms, stores, banks, schools, government centers, community centers, commercial buildings, light industrial complexes and housing. In fact, the Metal Building Manufacturers Association says industry sales exceeded $2-billion last year - double what it was just five years ago.

This reflects both a strong commercial building market and wider use of steel-framed and steel-paneled buildings. Advances in design and production have helped, too. That's why 80-thousand steel-framed houses were built in North America last year. The American Iron and Steel Institute estimates that steel-framed housing soon will account for a quarter of the galvanized steel market in North America. That means that every fourth ton of galvanized will go into a house.

Steel rusts. That's why it's coated. Carbon and alloy steel is covered with protective coatings of nonferrous-metal alloys or polymeric paints. The coatings bond chemically with the steel substrate and provide a protective layer against the environment. Coated sheet has such widespread end-use applications that almost 40% of the sheet steel used last year in the U.S. and Canada was covered with zinc, tin, aluminum, paint, acrylic, or some other protective coating. "Industrial activity is coated steel-intensive," says Purchasing Magazine's Metals Columnist Peter Marcus of Paine Webber Inc. "Besides automotive and auto-related plants, galvanized and painted sheet is being used to make heavy machinery, machine tools, railroad equipment, high-tech components, metal furniture, appliances, and a long list of other durables."

However, North American use has slowed from the double-digit pace of previous years. Analyst Bob Beddows & Co., is somewhat concerned about the level of demand from the automakers and food-canning industry. And, lately, there's been a resurgence in cost-cutting efforts by some large end-user segments that could reduce the tonnage of coated metal required for their products.

Still, 1996 consumption should slip only 2% off last year's volume of 25-million tons. The reason is simple: Automakers still are using a lot of galvanized.

Packaging firms still are consuming a lot of tin-plate and acrylic-coated sheet, and the construction industry still is buying a lot of zinc-coated and painted sheet. Here's a closer look.

Four-fifths of the galvanized steel buyers are involved in the automotive, distribution, and construction industries. Last year, they bought 18 million tons of zinc-coated steel, up from 17 million tons in 1994. This year, with use in steel-frame housing offsetting an expected decline from the automakers, they'll probably use 17.5-million tons. One big question is when the distribution will have reduced its level of galvanized metal in stock to resume a healthy rate of new-order activity.

As we've noted in previous MetalsWatch! reports, the steel industry is involved in a marketing campaign to popularize zinc-coated steel roofing panels and building siding. Market Analyst, Anthony Taccone at Beddows & Co., for example, sees 3 million tons/yr. of new coated steels sales possible from makers of metal buildings, decking, and culverts. This analyst supports an industry view that galvanized steel-framed housing could rise as high as 250,000 units-a-year throughout North America later this decade.

About 90-percent of painted and other coated steels are bought by makers of machinery, contractors' products, and distributors. Use last year was flat at 2.4 million tons. This year's outlook is continued flat use at the same 2.4 million tons.

Still, the mills believe future growth is possible. The heating, ventilating, and air conditioning end-use segment is a prime candidate for painted sheet. Remember, many apartment and garage doors already are painted-and-embossed steel products, kindred to doors adorning residential and commercial refrigerators and the outside wrappers of ovens, washers and dryers.

78% of the tin mill products go directly into containers and other packaging. Another 14% goes there indirectly through distributors and processors. That's a 92% market share for packaging and that's why use is pretty steady. But it's on a downward slide - mostly because the food-packaging is under attack by such alternative materials as engineered plastics. Last year, consumption was 4.7 million tons, compared with 4.8-million tons in 1994. But, consumer goods packaging is expected to slip this year, we see 1996 use at 4.6 million tons - or less.

That's why tin mill steel producers have been trying to outgrow their image as simply suppliers of the materials used for cans and bottle closures. Tin mills also want to be seen as suppliers of highly engineered, light-gauge, and durable specialty coated steels. Tin-plate now can be found in radiator fins, brake tubing, automotive fasteners, battery cases, and cable sheathing. Lately, the mills have been marketing their coated to the people who make appliances, auto parts, and contractors products.

IV. PURCHASING FOCUS

How A Well-Known Steel-Buying Team Integrates Suppliers Into The Design Process

You might think that after 120 years of existence, there's little need to improve the design and manufacture of the internal combustion engine. But, that's not true. Customer and environmental expectations keep rising. So, Caterpillar has found it must make constant design changes in the engines, and the various chassis they power. Market-driven changes have forced the company to develop multi-functional commodity teams to drive new product development. This, in turn, has changed the way the company buys its key raw material - including steel, and it has changed the way it deals with suppliers.

George Benedetto, Cat's Manager of Supply Management for the engine division, explains that the firm has begun to promote design integration among suppliers whose parts function together. But, to get to
that level, Cat's buyers first had to change their thinking about purchasing. Simply stated, they had to remake themselves and their suppliers into product-related, end-customer-oriented business units.

The options at Cat were few. The supply management organization could either work harder or work smarter. According to Benedetto, they decided to switch from a group of buyers concerned with basic purchasing activities to a group of supplier educators and enablers. Their buying team has changed into the conduit between the internal users and the external suppliers and they started doing all that by changing their elementary thinking. Their change in focus required them to ask a series of questions that you might find useful:

First, look at the buy. Is what you're buying today truly what's needed? Or, is it the result of dated specifications? Or, is it the result of compromises made in the past for reasons that are no longer valid? Can your suppliers help you make the needed changes?

Look at your suppliers. Are your prime suppliers really world class? Do they match up with your current procurement processes? And, are their technological and production capabilities sufficient for your future needs?

Study the supply chain. Do the pieces of the supply chain really fit together? Are the suppliers' suppliers good enough for the service you need from them? How good are your links between design, manufacturing, procurement, and marketing?

Investigate changing conditions. Is what you make - generally, how you do business - the best possible way for current business conditions? Where should you be looking for new ideas? What new technology needs to be explored? How should your relationships with suppliers change?

Then ask about monitoring. The deeper companies become committed to supply management, the greater their need to develop supplier performance metrics. So ask: Where do you need to devote more attention to ensure that quality is built into the procurement process?

Our point: Don't let supply chain management intimidate you. No matter what you buy, you're involved in it. And doing it effectively is mainly about asking significant questions.

V. FORGING UPDATES

Future Demand Will Stay Healthy

The latest market data suggests that growth in sales of steel forgings will average 2.5% for the next five years, an improvement over the 2% growth of the past five years. Market researchers at the Freedonia Group in Cleveland tell PURCHASING that gains will stem from increased demand for semi-processed components by makers of industrial, construction, and electrical machinery. In the past, many of these firms ran their own forgings shops, but these are being closed for competitive reasons, says Industry Analyst, Joshua Billings. Atop that, he says imports of foreign-made forgings will continue to contract because of currency considerations.

"Competitive pressure from plastics and new metal alloys will force forgers to reduce the weight of their components," Billings says. This will be especially noticeable in the forgings being shipped to makers of parts for automotive and off-road vehicles. "Forgings may lose some market share for smaller parts to castings and powder metal parts," Billings says, "But will retain their preeminace for very large items or parts that are neither complex nor intricate." He suggests that forgings sales in the U.S., which totalled 1.3 million tons last year, will rise to almost 1.5 million tons by the year 2000.

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"MID-YEAR STEEL MARKET UPDATE"

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