

Inflation/Lead Times Are Procurement Headaches

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Procurement has certainly felt the effects of the energy crunch. It has been, and continues to be, a real challenge. Energy, however, is but one factor in the complex market system we are now facing. Steel and money are also in short supply and they contribute greatly to the current crunch. Government cost controls are a factor too. Some of the causes and few trend charts will help to pinpoint what is happening.

Steel is in short supply worldwide—has been since early last year. U.S. mills shipped a record 111 million tons last year by using up inventory and postponing maintenance shut downs. Total shipments this year will fall short of this record. But, still the demand increases. Foreign steel won't help because worldwide demand is also strong.

The steel shortage was already with us last fall when the oil producing nations suddenly ballooned the price of oil. Drilling programs immediately expanded, and the resultant demand for oil country tubular goods staggered the already overloaded steel industry.

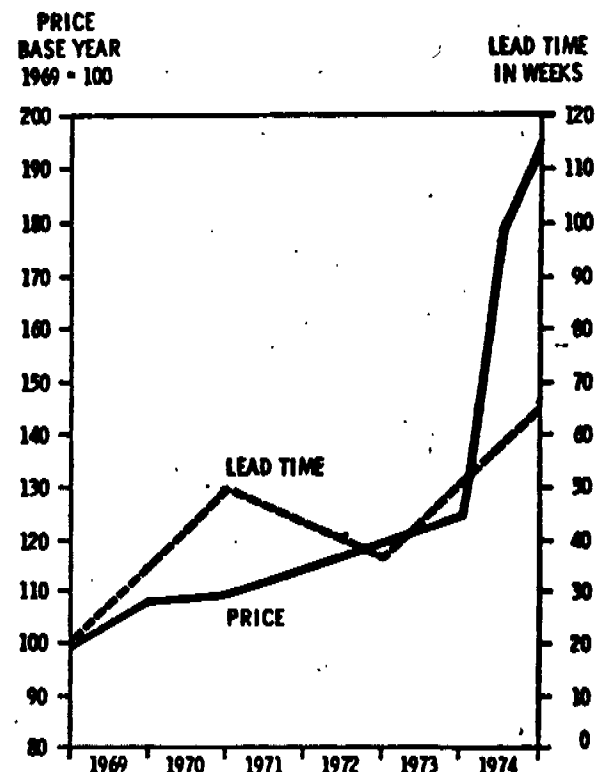
Government price controls also contributed, particularly in recent months. Controls kept domestic prices too low, with the result that mills increased exports, thereby worsening the steel shortage. The elimination of controls should bring some realignments of supplies as well as of prices.

Late last fall, we prepared some trend charts to show what was happening to some of our commodities. The charts covered the period from 1969 and included a projection for 1974. They are reproduced on these pages along with pertinent comments.

These are simply selected trends on a few major commodities. They do, however, reflect the general unsettled nature of the markets we buy from. We hope that markets will stabilize and that the supply situation will ease, but this doesn't seem to be in the cards for the balance of this year.

Price and delivery escalation are not the only problems that the steel shortage and energy crunch have caused, however. Wildcat strikes

have shut down a number of machinery shops. Firm price quotes are vanishing. Until last summer most purchases were made on a firm price basis; now it is rare. Requests for advance and progress payments are increasing since suppliers are having difficulty financing their operations. Finally, *force majeure* claims are up, with some manufacturers refusing to ship firm orders until they get increased prices due to the volatile pricing conditions they, too, are facing.



NOTE: MOTOR OPERATORS COULD EXTEND LEAD TIMES BY 20%.

Cast Steel Valves

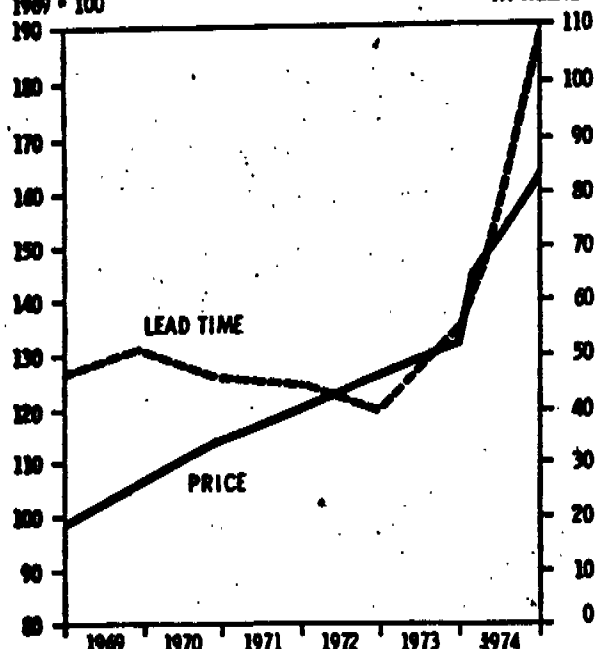
The major valve suppliers jacked up their prices by as much as 40% during the four-month period from October to February. This has always been a competitive, low-profit industry. When the prices of the castings, forgings, and other raw materials leaped up, the valve manufacturers had no margin to cover them. The rapid rate of increase predicted for the balance of 1974 reflects the expectation of the manufacturers that the prices they pay for their materials will continue to escalate at a rapid rate.

This material was excerpted from a talk given at the AIChE Engineering Construction and Contracting Committee's meeting in San Francisco in May. The entire paper will be included in the Proceedings which are to be published. Their availability will be announced in CEP. Ed.

TRENDS

PRICE
BASE YEAR
1969 = 100

LEAD TIME
IN WEEKS

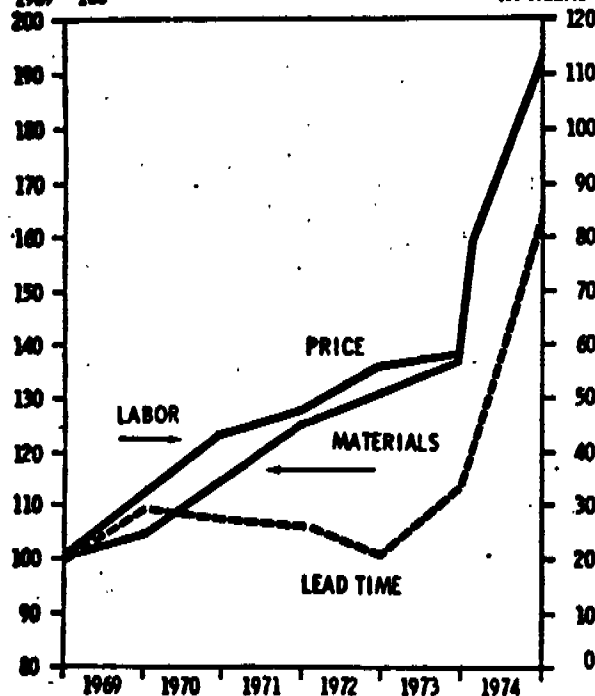


Fabricated Piping (Refinery)

Critical shortages of pipe, flanges, and fittings have severely altered the delivery situation for fabricated piping. And recent price rises for these materials have caused rapid escalation in the price of fabricated piping.

PRICE
BASE YEAR
1969 = 100

LEAD TIME
IN WEEKS



Heat Exchangers

Prices have risen steeply, much more so than anyone thought they would last fall. This has been a low-profit business for many years, but perhaps this is changing.

Lead times are following the predicted curve, and the manufacturers believe the 70-week prediction for the end of '74 is about right. Perhaps it is, but this depends largely on future oil refinery and petrochemical plant expansions. If some more expansions are announced, heat exchangers could become a real bottleneck.

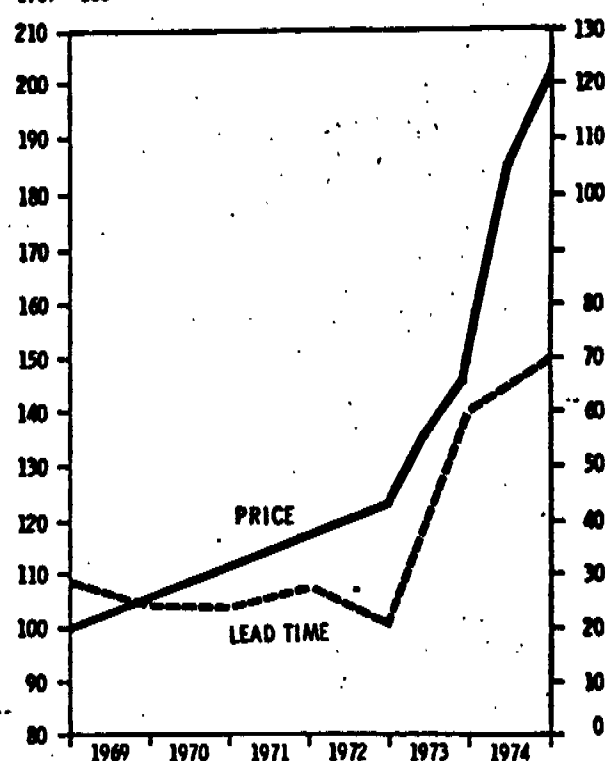
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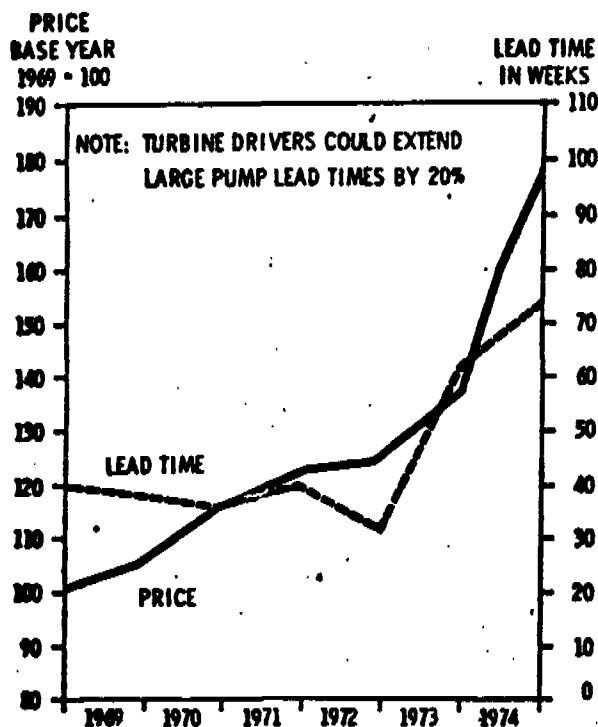
Centrifugal Compressors

The lack of demand for new refinery units is reflected in this chart by the declining lead times from 1970 through 1972. During this period, a major manufacturer concluded that there was more capacity available than the demand would support and that firm went out of the business. The upturn in demand now finds the industry with insufficient capacity. Centrifugal compressors will remain a bottleneck item for the foreseeable future.

PRICE
BASE YEAR
1969 = 100

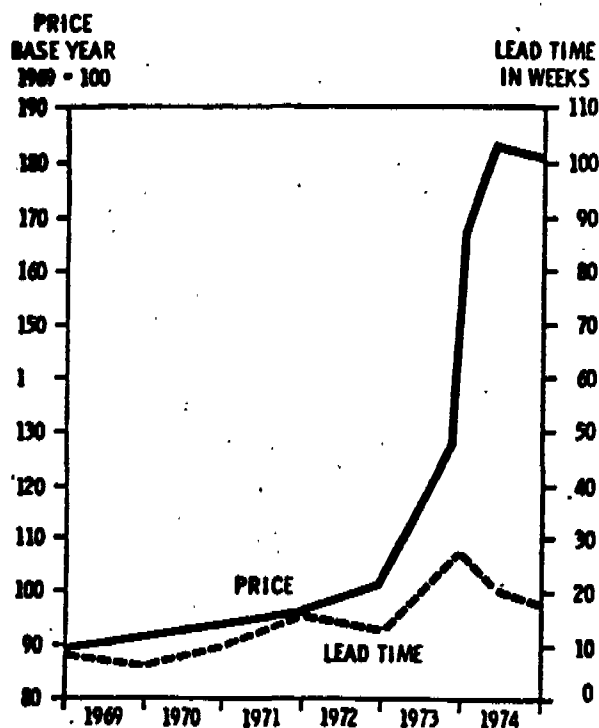
LEAD TIME
IN WEEKS





Refinery Pumps

Refinery pump suppliers were not at full capacity for several years and the drop in lead times from 1969 through 1972 reflects this. Most of the pump suppliers were unprepared for the sudden influx of orders that started in late '72. Their heavy backlog, together with shortages of forgings and castings, has extended lead times considerably.



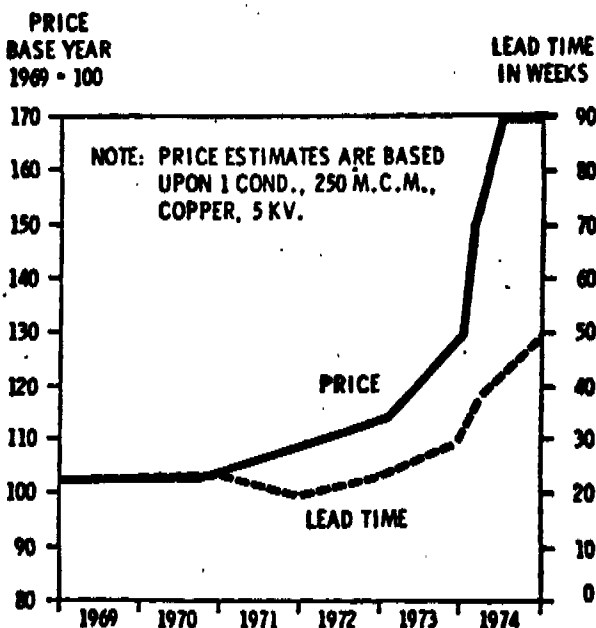
Reinforcing Steel (Non-Nuclear)

This is rebar for plants that don't need the nuclear quality assurance pedigree. The price shot up faster this spring than anyone could predict. This was mainly due to the unprecedented rise in the price of scrap steel, which rose from the \$50 price of last summer to a high of \$155 per ton in early April. Scrap is important to rebar because most rebar mills use electric furnaces and these usually are 100% charged with scrap. The relationship between the price of scrap and the price of rebar is equal, dollar for dollar.

In recent weeks the price of scrap has dropped to somewhere around \$95 per ton. Actually, scrap varies widely from city to city and from type to type. The figures used here are for #1 heavy melt at Chicago.

We have tried to get from our suppliers some predictions as to the future of the price of scrap and the price of rebar, but we have no takers.

The delivery trend is really difficult to depict accurately. Earlier this year a number of firms simply stopped bidding rebar and it became very scarce. Then in February the Cost of Living Council granted some of the smaller steel mills some pretty good price increases. Almost immediately several firms called to say that they were back in the marketplace and could deliver on fairly good schedules. Note that we expect the deliveries of rebar to drop under 20 weeks by the end of the year.



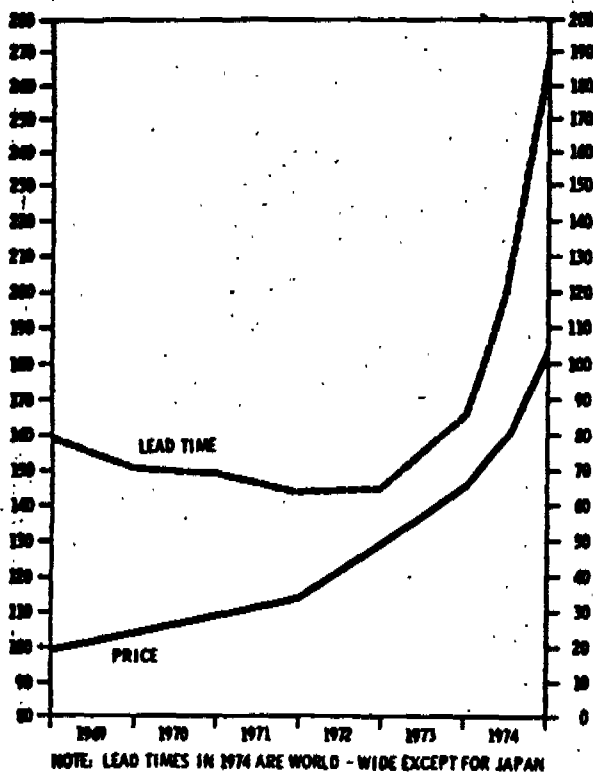
Wire and Cable

Last fall we predicted a pretty good price rise through the balance of 1974, and prices have really shot upward. We hope they will stabilize by mid-year and will remain somewhat constant.

TRENDS

Here again the cost controls held prices down too low too long and created a supply shortage. Prices started upward in February when the Cost of Living Council permitted what was called a "volatility" price increase. This allowed manufacturers to increase prices in relationship to their increased costs. Many were using a significant amount of imported copper which was priced above \$1 a pound compared to the domestic controlled price of 60¢ a pound.

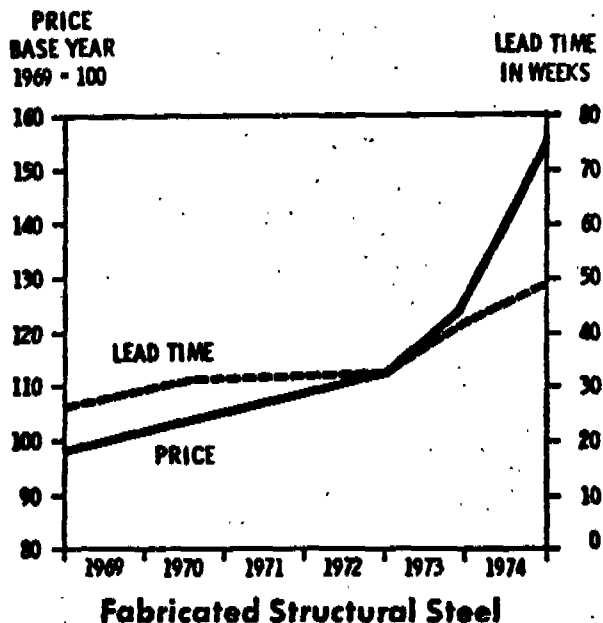
With the end of controls domestic copper jumped to 80¢. Plastics, which have also been in short supply, have risen with the end of price controls. These higher prices are bringing some materials back into the domestic market. For this reason, cable manufacturers are telling us that they do not expect deliveries to lengthen as much as we had originally predicted. The trend curve shows the average delivery time for different types of cable, a wait we now expect will lengthen to about 50 weeks by the end of the year.



Heavy-wall Reactors

Lead times have continued to lengthen, and might reach 190 weeks by year-end, except for Japan, at least for a while. The Japanese shops were also overloaded until the oil-price crisis. This turned their balance of payments situation upside down. In order to stem the tide they canceled most of their domestic programs and started up a heavy export program of

steel and steel products. Until their shops fill up, deliveries of about two years will be available, but at high prices. Bargains have gone out of style everywhere. Domestic shops have the heaviest backlog in history. Some shop expansions are being planned, but nowhere near enough to satisfy the demands.



The curve on this chart reflects an unusual situation. Lead times are not as bad as forecast. Many fabricators throughout the nation have been able to get sufficient allocations—more than they expected they would. This reflects the fact that most of the standard heavy structural shapes are a more profitable item for the steel mills than some of their other lines.

There are still shortages in some areas of the country, particularly in shops in Texas. But on the west coast and throughout the east, structural shops appear to have sufficient allocations to assure delivery of orders for fabricated steel within 50 weeks.

Some of the lightweight structural shapes and plate are, however, in short supply. Some mills have drastically cut down on production of these items because they are low-profit items. Structures utilizing large amounts of lightweight shapes and plate could require longer lead times.

Prices for fabricated structural steel have risen more rapidly than anyone could foresee last fall.



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