METHOD

HIAB

Method No. 16

A magazine featuring the Hiab Method and its applications.

Contents:

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Cover

A HIAB 550 at work on a rock crusher from Svedala-Arbrå.

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Ideas

Some of the earlier issues of Method were devoted wholly or largely to the application of the Hiab Method within a specific field. On one occasion it was forestry haulage, on another we dealt with transportation requirements in building and construction, and on a third we devoted most of one issue to piece-goods handling, and so on.

This issue, too, may be said to have a theme, even though it may be difficult to spot the common denominator in the articles and examples. The subject around which we chose to write this time was the unique versatility of the Hiab Method. Letters and enquiries we have received from Method readers have revealed that there is considerable eagerness for information even about the more unusual and highly specialised applications of the Hiab Method. A solution that looks at first sight like a one-shot affair, because the problem that inspired it is so specific that it can hardly occur in more than one place, often proves to contain the seed of the solution to a wholly different problem in some other business in a far-removed part of the world.

So in this number we have brought together quite a sheaf of articles and numerous examples concerning more or less unusual and far-out occupations. Our description of how a palm-oil plantation in Malaya is cutting its transport costs by the Hiab Method is not addressed primarily to other palm-oil growers, either in Malaya or anywhere else. The article in question is written for those Method readers to whom the Malaya solution may suggest a better way of tackling their own transportation and handling problems. We don't know yet who those readers are, but we know they're there, and we hope they'll read the article and find their inspiration in it.

Six tons are loaded in about 25 minutes with this equipment. Each net contains on the average 250 kg of fruit.

Cheaper Transport on the Nam Heng Estate

At Kota Tinggi in Johore, on the southernmost tip of the Malayan peninsula, lies the Nam Heng Estate. It's an oil-palm plantation. And with the help of the Hiab Method it has developed a transport system that has cut its overall transport costs by 30% and the costs of the actual loading by a good 53%.

The Hiab Method was introduced during the winter of 1969–70, and Kulim Rubber Plantations Ltd., which runs the Nam Heng Estate, has carried out thoroughgoing cost-and-performance comparisons. The results indicate substantial gains all round, even though the problems involved in this business are numerous and stubborn. Here are some of the factors that have to be allowed for:

- To obtain maximum oil yield the fruit has to be harvested at the correct degree of ripeness, so that there are wide seasonal variations in harvesting work.
- The ripe fruit is perishable, and must be got to the mill without delay so as not to jeopardise the yield and quality of the oil.
- The fruit is delicate, too, and has to be handled gently. Damage to the fruit results in oil losses.
- During the peak season the mill has to work 24 hours a day so as to cope with the quantities harvested during daylight hours. So it's best if transportation, too, can be a round-the-clock operation—otherwise the fruit would have to be buffer-stocked at the mill, entailing another round of handling and increasing the risk of storage and handling damage.

Net Gains with the HIAB 245

That was the problem, then—and it was solved with substantial gains all round by a specially evolved transport apparatus employing six-ton trucks with tipper gear and high flaps. Each

truck is equipped with a HIAB 245 mounted behind the cab and with its controls carried up so that they can be reached from a hatch in the cab roof. The truck is normally crewed by a driver and mate. The driver stands in the roof hatchway to operate his loader, and has a clear view of the whole loading zone.

Stout nets of synthetic material are used to gather the fruit into suitable loading units. They measure 2×2 metres, and are fitted with ropes at the corners and eyes to take the lift hook of the loader. The maximum "net" capacity is about 700 kg of fruit.

Six Tons in 25 Minutes

The nets are driven out to the harvesting area by special vehicles and are laid out at about 30-metre intervals right alongside the transport road. The harvest workers put the fruit into baskets and carry them to the roadside, where they empty the contents into the nets.

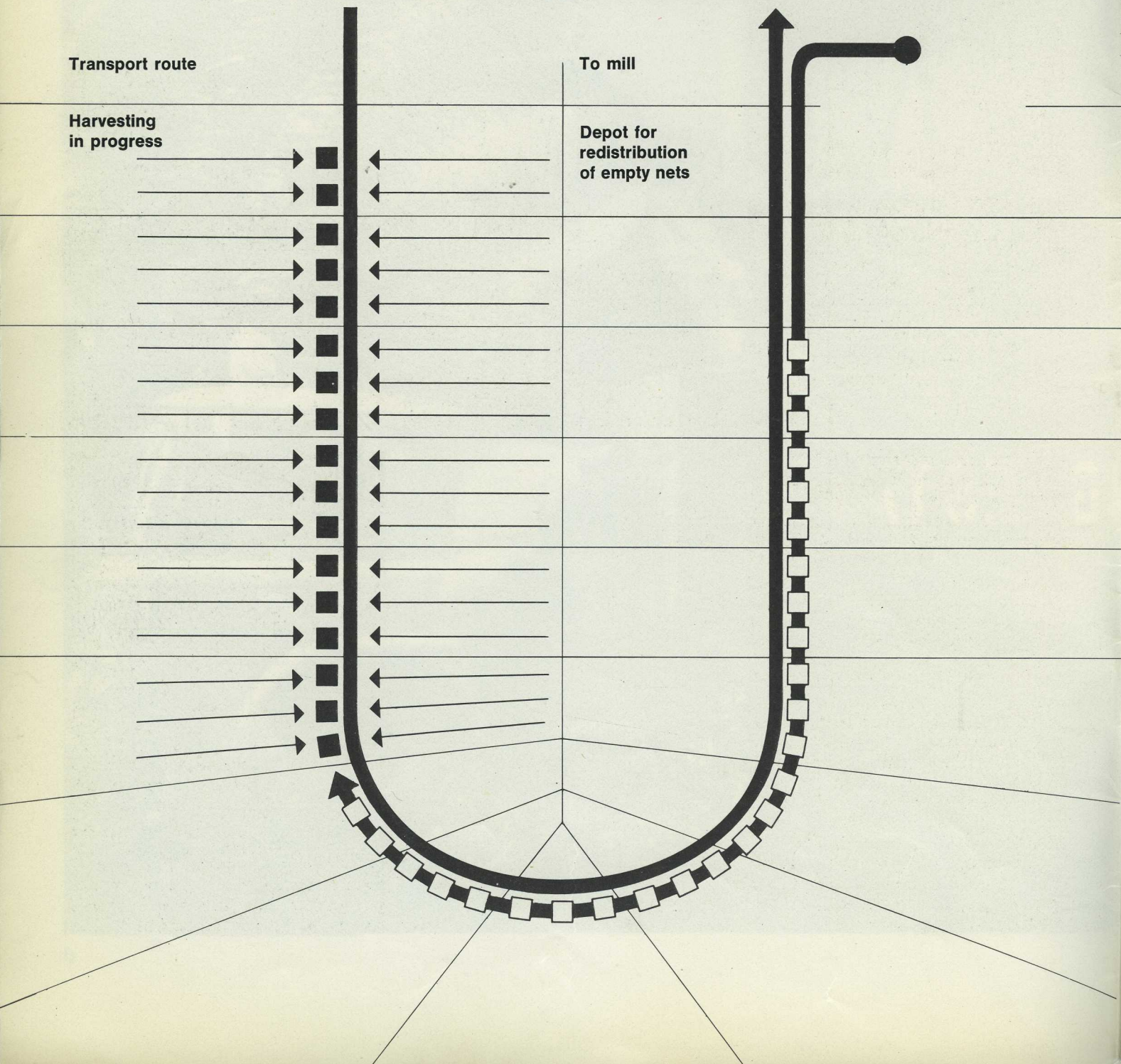
When the truck comes along, the driver's mate hooks the net to the loader, which hoists the load onto the truck deck and empties the net. The empty net is hung on the back of the truck and dropped off at a collection point on the road to the mill. The distribution vehicle then runs the nets back to the plantation again.

It takes about a minute to load a net and move the truck to the next one, irrespective of how much the net contains. The transport people aim for a minimum load of 200 kg in each net, giving a maximum loading time of 30 minutes. In the normal way the nets contain somewhat more than 250 kg each, so that the average loading time is about 25 minutes. The load is tipped off at the mill.

Since the vehicle crew—thanks to the Hiab Method—can handle the loading job without additional help, transport operations can easily be extended to the full 24 hours. This would be a good deal more problematical with manual loading, which would call for a loading crew of four persons plus the truck driver.

The table opposite shows the time required and the performance obtained when the Hiab Method is employed, as compared with the corresponding figures for manual loading. The

HOW A PLANTATION IS LAID OUT



example is valid for a harvest site about 30 km from the mill.

The differences become still more striking when the fruit is hauled from a harvesting point only a few kilometres distant from the mill, with the round trip taking only 30 minutes or so. With the Hiab Method under such circumstances it is no trouble to deal with 20 loads in 24 hours whereas manual loading crews operating in daylight could not manage more than five or at the most six loads—in other words 120 tons as against 30 or at the outside 36 tons.

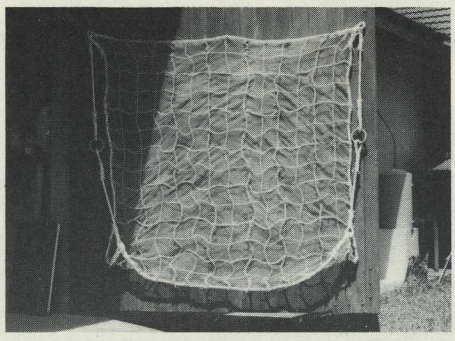
	Hiab Method	Manual loading
Load per trip	6 tons	6 tons
Loading time	25 min.	1¾ hours
Road time to mill, offloading and return	2 hours	2 hours
Capacity per 12½-hour day	5 trips/30 tons	3 trips/18 tons
Capacity per 24-hour day	9 trips/54 tons (day and night)	4 trips/24 tons (daytime only)

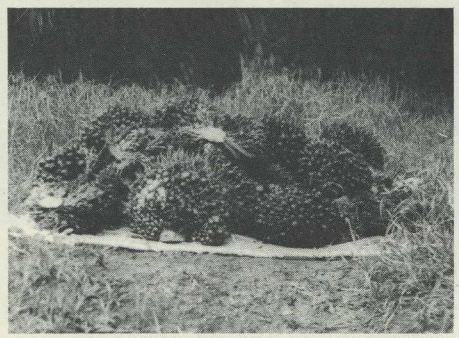
Smaller Investment

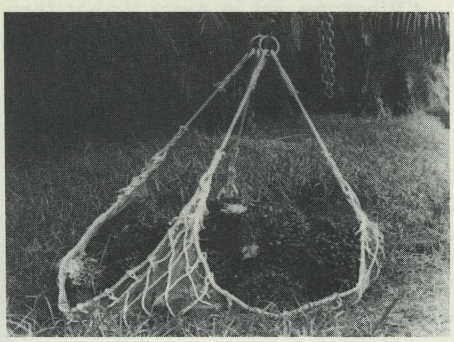
Since all harvested fruit has to be hauled to the mill almost immediately, the peak transport requirements will decide the dimensioning of the transport apparatus. It is apparent from the above example that a Hiab-equipped outfit can match four manually loaded outfits in capacity. Against this, the Hiab Method has to carry the cost of the loader, the nets—250 of them per outfits—and the net-distribution vehicle. The large number of nets is made necessary by the fact that harvesting work is confined to daylight hours whereas transportation goes on round the clock.

The average costs per month will be a good deal lower. In practice, handling by the Hiab Method has reduced transport costs by about 30%—besides the advantages gained from the smaller number of trucks and personnel, faster delivery and less damage to the fruit. ■

Article No. 1







1. The nets that are used are a combination of a coarse-mesh net made of stout ropes and a finer net that prevents the fruit from lodging in the meshes of the coarse net.

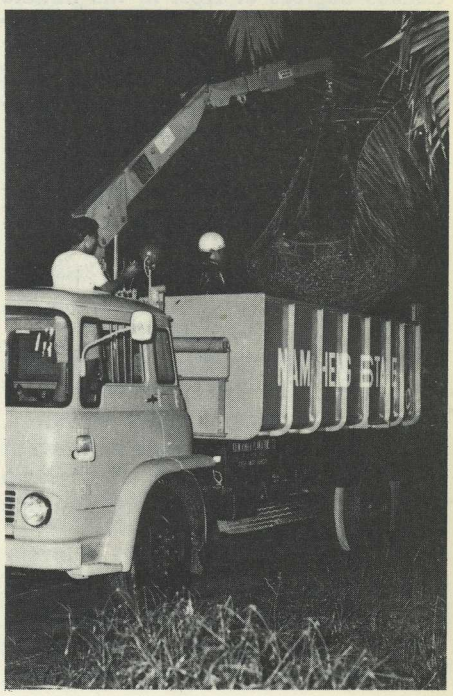
2. The harvest workers collect the fruit in baskets and empty them onto the nets at the roadside.

3. The truck driver's mate attaches the eyes of the net to the loader hook.

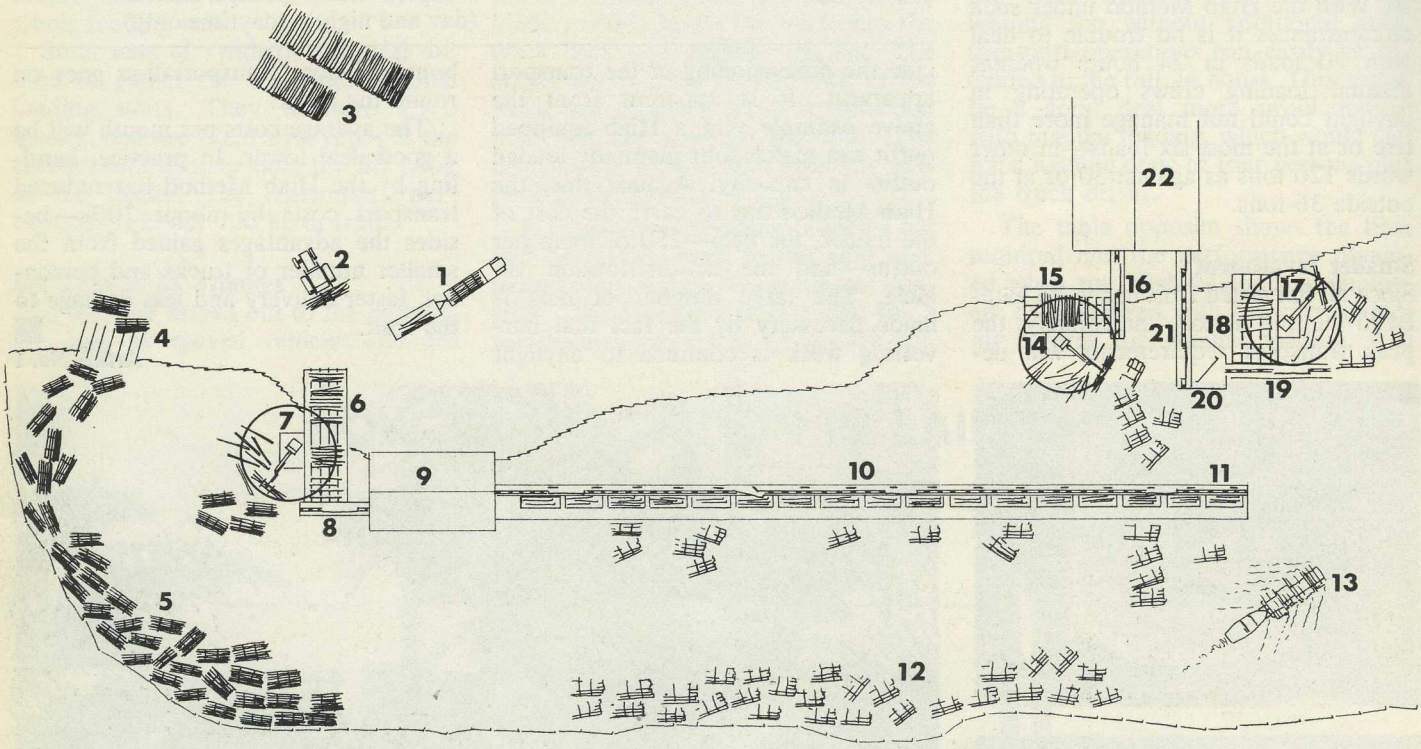
4. One net holds a maximum of about 700 kg of fruit which is loaded in a single lift.

5. The driver operates the loader from a hatch in the cab roof and has a good view of the job. Picking up one netload and driving to the next takes about one minute.

6. During the peak season the harvest hauls from the plantation go on all through the night, giving the outfit a very high capacity.



How a Sawmill Economises on Exertions, Expletives and Explosives



This is a diagram of the timber handling at the Silverhöjden sawmill in Sweden.

1. Timber arrives by truck. 2. Discharging by front-loader. 3. Buffer stocks, unbarked timber. 4. Unbarked timber is bundled into pond. 5. Pond storage, unbarked. 6. Cross-conveyor to barking. 7. Hiab loader for pond-stored timber to barking. 8. Log elevator to barking. 9. Barking. 10. Sorting, 16 sizes. 11. Pocket for wrongly sorted logs, return to 7. 12. Barked and sorted timber stock. 13. Boat transport of logs in water. 14. Hiab loader, small wood. 15. Cross-conveyor, small wood. 16. Elevator, small wood to saw. 17. Hiab loader, large logs. 18. Cross-conveyor, large logs. 19. Elevator for large logs from water. 20. Turner for large logs. 21. Elevator, large logs to saw. 22. Saw.

The winters are cold at Silverhöjden in the backwoods of central Sweden.

"A few years back, we had eight Celsius degrees of frost in the middle of November. It was another four months before it got that "warm" again. And there was one spell of several weeks when the mercury never went above —20° day or night. Working on the logs down by the waterside was no picnic then," recalls Assar Aronsson, the supervisor at the Silverhöjden sawmill.

"We used to put all logs, barked and unbarked alike, into the water. So we had to fish out every log twice, first for barking and sorting and then for sawing. The logs were worked by hand onto ordinary chain elevators, one at the barking machine and two at the actual sawmill, where we had two lines, one for the small wood and one for full-size logs.

Dynamite and Damnation

We turn out 8,500 standards of sawn timber a year, and when we're going at full blast we put about 2,800 logs a day into the sawmill and 2,500 into the barking machine. In summer, it was a fulltime job for two men at each elevator. In winter, when the bundles were frozen together, we had to have five—that's about as many as you can find room for on the jetties round the elevator. Five big, hefty guys who pitched into those bundles for all they were worth. It took a lot of sweating and swearing, and plenty of pry bars went to the bottom along with the sinker logs. And even so we couldn't really work up a smooth flow of logs at the intakes, besides which, as time went on, it got harder to find men who were willing and able to tackle a job as tough as that.

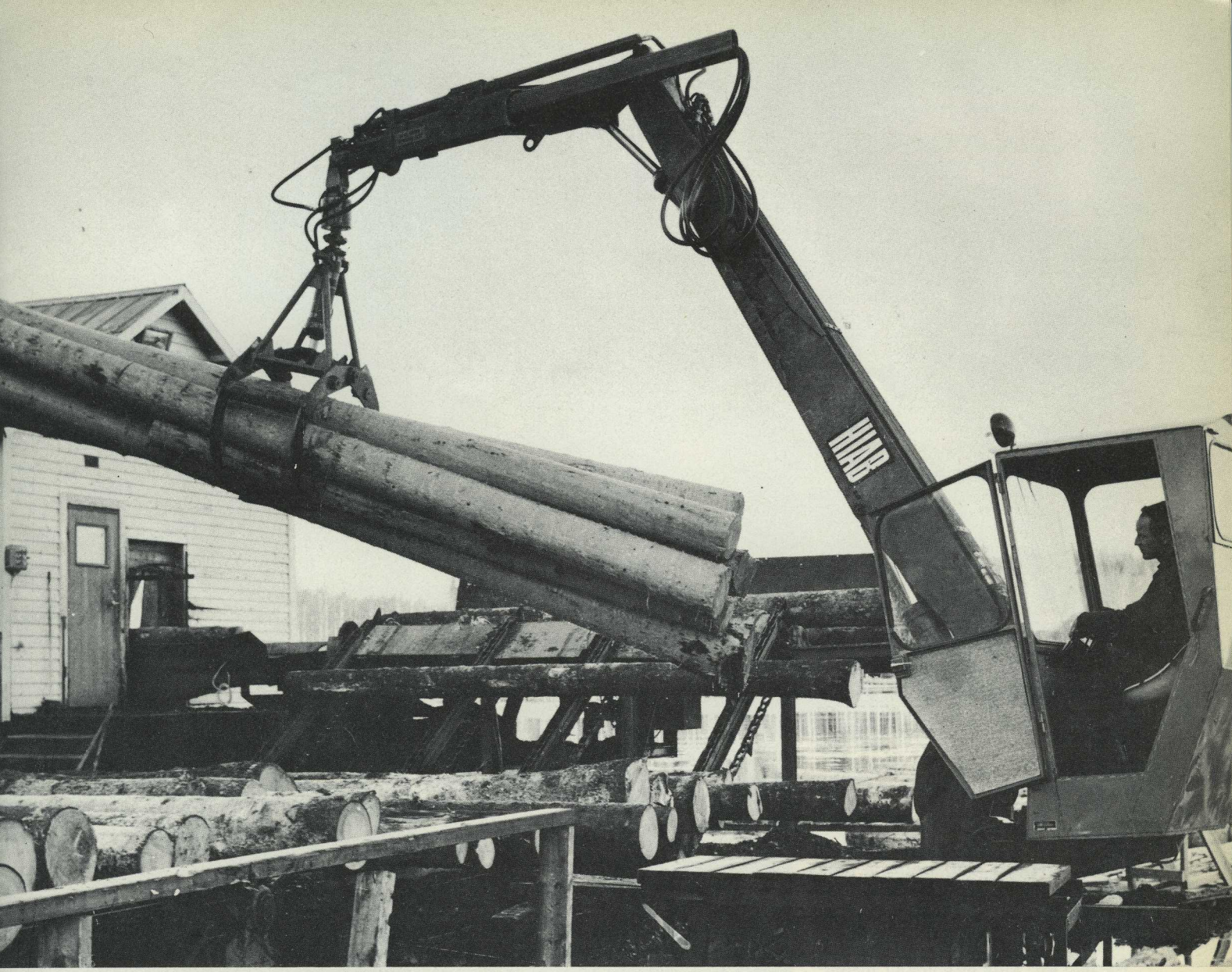
"There are current formers to make sure that we have open water inside the booms however cold it gets. But the bundles still freeze up good and solid—at any rate the ones at the waterline and above. When things were at their worst we had to blast those bundles apart with dynamite.

"Last winter we re-arranged the intakes, both at the sawmill and at the barking machine. Instead of nudging the floating logs onto the elevator by hand we installed Hiab loaders which place them on tables with cross-conveyors that carry them over to the elevator. This has given us a number of advantages.

"Since all the timber arrives here by road we've built a big reception stage at the barking machine where we can take the logs straight off the trucks using fork lifts. We handle as much as we can in this way, which saves us having to dump it into the lake and fish it up an extra time for barking and sorting.

"When we get in more timber than the barking machine and a small buffer store next door to it can handle, then of course we have to store it in the lake just as in the old days. And then, when the deliveries by road aren't enough to keep the barking machine occupied, we draw on the water-stored timber, hoisting it onto the infeed table with a Hiab loader.

"We feed the sawmill with logs in the same way. We have a loader for



All the loader operators sit in comfortable heated cabs. This loader is sited at the infeed to the barking plant, so it normally works with unbarked logs. The barked logs in the grapple are wrongly sorted timber from the sorting plant, here being lifted up for return to sorting.

each line. The loaders hoist the logs onto the feed table and also turn some of them round so that they all enter the saw top end first.

"The Hiab hydraulic grapple can outdo even the beefiest crew of labourers with pry bars, so these days we seldom have trouble separating frozen logs. The ones that don't come apart right there in the water when the grapple bites into the bundle break loose from each other if the loader operator drops them heavily onto the infeed table."

High Capacity

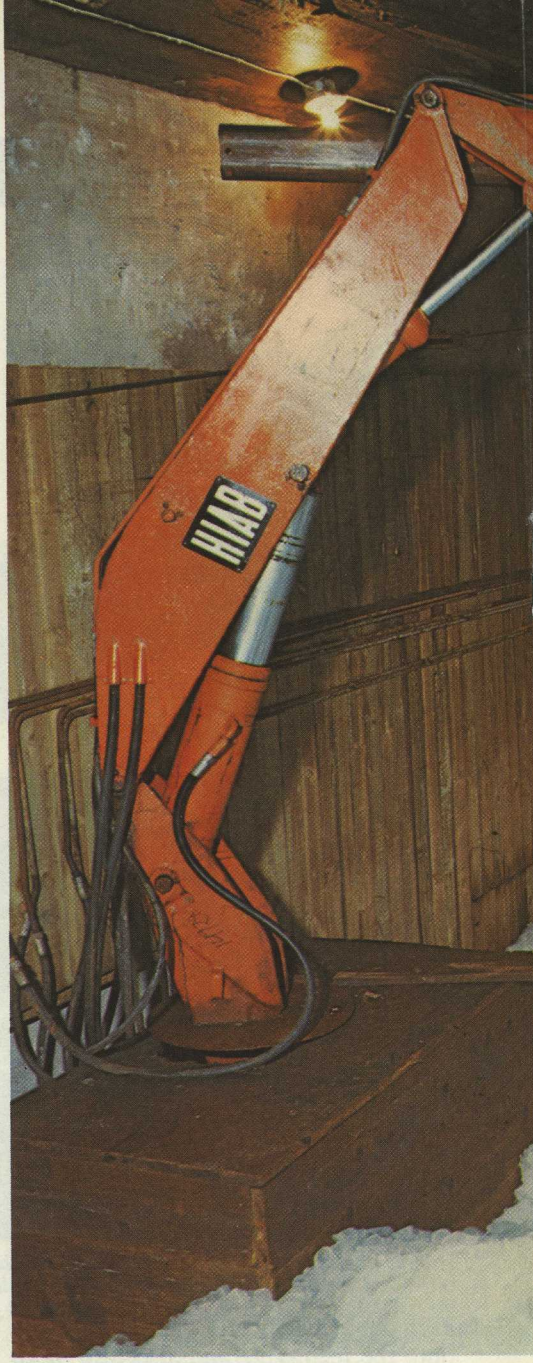
The Hiab Method has enabled the mill to save at least four men—and many more in winter—and still achieve greater capacity. The heaviest timber traffic is at the infeed to the barking machine. At that point the operator has an assistant who clears away bark, straightens out logs that get off course and so on. As far as possible they take the timber feed straight off the incoming trucks, but when that source fails the loader can still keep up with demand since none of the logs have to be turned round before entering the barking plant.

At the intake to the small-wood line the loader can handle so many logs in one lift that the operator doesn't need to run the loader continuously. In time, too, he learns the knack of grasping the logs so that he almost always gets all the logs in the grapple the same way round. So nearly every log goes onto the table the right way. Only now and then does he need to pick up and reverse a log that's already on the table. When he has stocked up a full supply on the table he can leave the loader for a while and do something else, such as pulling a new floating bundle into reach of the loader or helping out at the large-log line.

His assistance may be needed because the large-log intake is in many ways more complicated than the job of handling small wood. It's true that the infeed rate is about the same—some 1300–1400 logs per eight-hour shift. But when the largest sizes are being run through the saw the loader can't take more than two or at the most three logs per lift as a rule. The water is shallower at this point, too, which means that at low water (this lake is part of a controlled system and the level can vary three feet or so) it can be difficult to bring the timber bundles to within convenient reach of the loader.

So at the large-log intake the mill has installed a mechanical log turner which ensures that all the logs are the right way round as they ride the chain elevator into the sawmill. Not having to turn any of the logs, the loader can feed them in at a faster rate. And as a standby the mill has a short additional elevator onto which the logs can be worked by hand in the old way so as to keep the saw fully occupied. ■

Article No. 2



Stone

Råsjö Kross is a mobile stone crusher that is currently on station in central Sweden. A HIAB 950 with a rock grapple is a small but vital cog in all the machinery. Bengt Råbom can tell us about the part is plays:

"We had this king-size loader installed just after the holidays last summer, and since then it's been in action almost the whole time that the crusher has been running. At times, almost every truck that comes in is carrying some rocks that are too big. With the Hiab on hand it's no trouble to lift them clear or turn them round so that they'll go into the crusher without having to stop the whole plant.

"Earlier on, the standard equipment was a travelling hoist running above the crusher intake, but to use it we had to stop the crusher first. And that meant that all the rest of the machinery stopped too, and this sort of thing cost us a great many expensive minutes."

The Svedala-Arbrå company, whose products include stone crushers, points out that the Hiab Method really comes into its own on mobile plants. Outfits of this kind are in frequent use on roadbuilding operations, where they are used for crushing the rock broken by large-scale blasting. On these projects the engineers endeavour to break a lot of rock without using much explosive, which results in pretty hefty boulders. Putting it another way, they aim at blocks very close to the maximum size the crusher can manage.

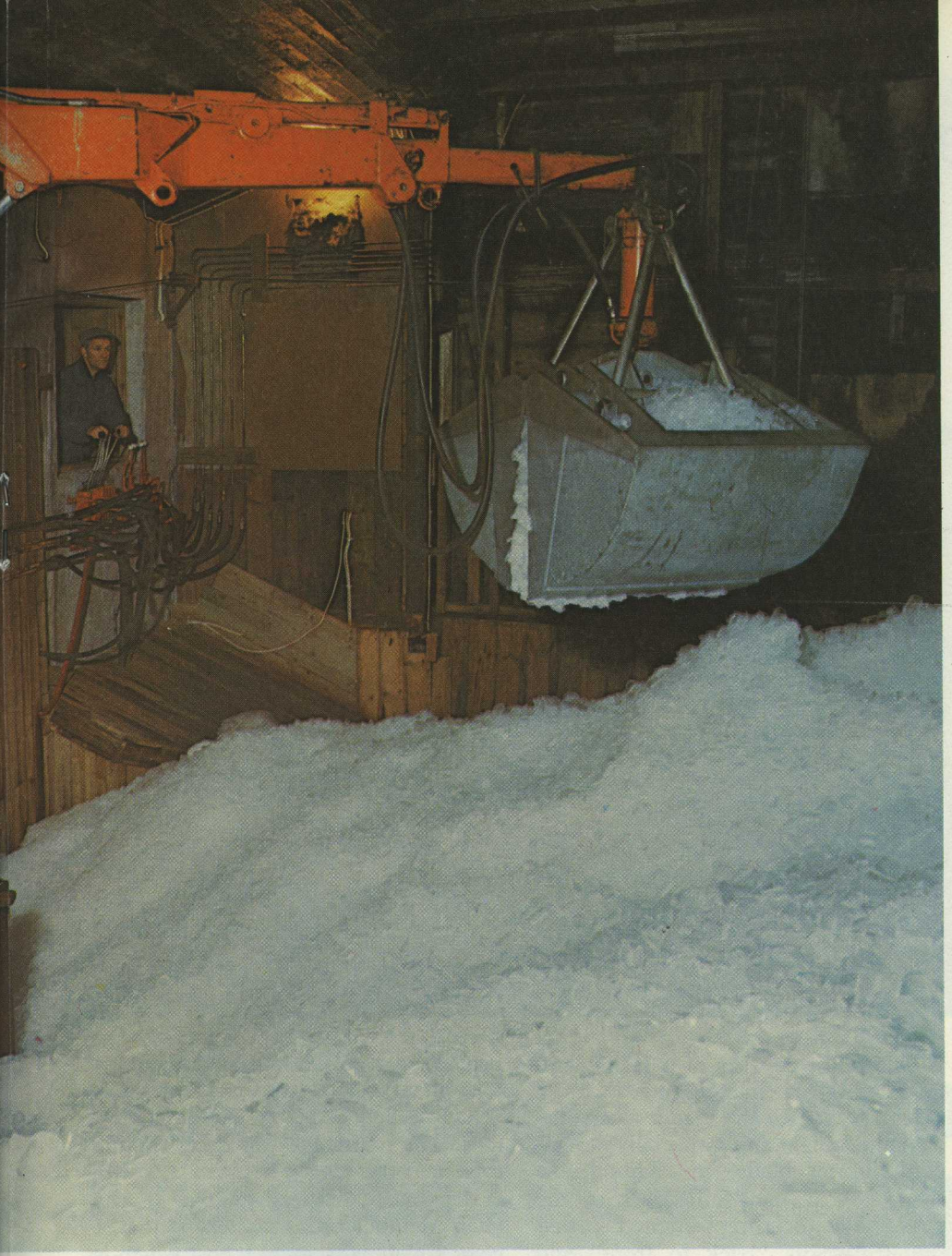
A non-mobile crusher, by contrast, gets its input from foundation excavations and so on, where considerations of precision and safety necessitate greater caution in blasting, so that the stone is broken up better.

But however you look at it, interruptions cost money. Even a mobile stone crusher represents an investment in the million-crown class if you count its attendant sorting plant and conveyance equipment as well. Its capacity is about 2,800 tons a shift assuming continuous crushing. This means that every idle minute entails a production loss of close on 6 tons—and if the crusher is at a standstill for two minutes then you're a whole truckload behind.

Nowadays, Svedala-Arbrå equips all its crushers with Hiabs having hydraulic rotators and rock grapples. The smaller models, with intake openings up to 90 cm, are equipped with the HIAB 550, and the two largest models, having openings of 105 and 120 cm, with the HIAB 950. The extra cost of the Hiab loader is more than justified by the reduced production loss.

The loaders are also useful for handling crusher plates and side wedges. These are expendable crusher components, which normally have to be reversed or replaced at intervals of a few weeks or a month. ■

Article No. 3



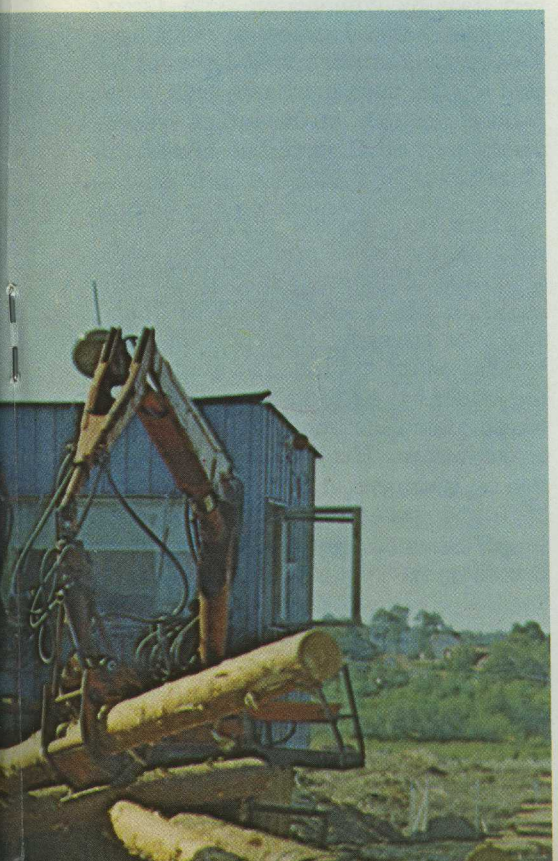
Ice

Ice is an important commodity in the handling, transportation and storage of fresh fish, and icemaking has come to be an important service function in our fishing ports. But this ice poses a handling problem in itself. Modern fishing vessels are large craft that spend long spells at sea, so that they require large quantities of ice which have to shipped in the briefest possible time.

The supplies are produced in icemakers that are on the go round the clock at times of peak demand. After the ice is crushed it is stored in large bunkers in readiness for the fishing boats. Two Hiab loaders, fitted with ice buckets each holding 500 litres, are the normal means of transferring the ice from bunker to ship. The loaders hoist the ice into a large hopper, beneath which is a screw conveyor which carries the ice up through a duct to a weighing machine and from there to a belt conveyor which runs out onto the quayside. From the belt the ice drops straight into the boat through a pipe which is free to swivel so that the load can be distributed round the hold.

Because the ice is to be used in contact with foodstuffs, special requirements apply to the equipment handling it. Ordinary hydraulic oil is banned—the loaders work with edible oil in their hoses and the ice buckets are galvanised so that they won't rust or discolour the ice. The oil pressure comes from two electric pump units, both of which can be connected to either of the loaders. This substantially reduces the risk of stoppages. In normal circumstances the loader can ship ice at the rate of 10–12 hectolitres a minute. ■

Article No. 4

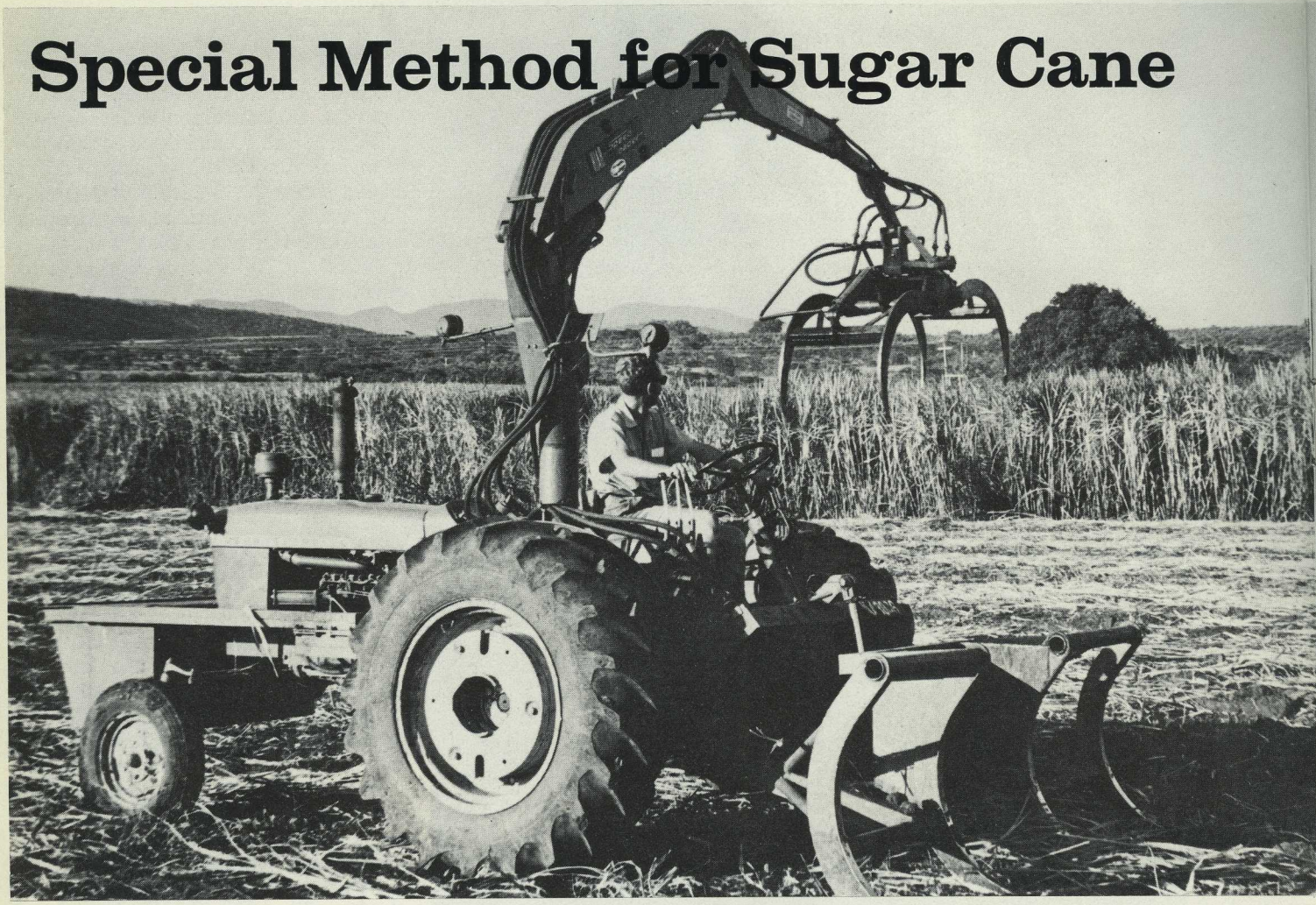


One Of The Busiest

A Hiab loader that really has to work for its keep is the one stationed alongside the infeed to the barking plant at the Håstaholmen sawmill outside Hudiksvall. Its job is to see that all the logs enter the plant root end first, which means that on the average it has to lift and reverse every other log. It notches up a lot of lifts, since the sawmill is one of the largest in Europe, with an output of 33,000 standards. The plant operates two shifts a day and accepts about 1.4 million logs a year. The number passing the loader per hour works out at 550–600—and half of them have to be reversed. Iggesunds Bruk, which owns the sawmill, has done a frequency study on the work of this Hiab. It emerged that in one hour the loader performs more than 1,800 movements of one kind or another, which adds up to about 15,000 a shift. And it's been doing that for the past four years, with only brief interruptions for servicing. The mill also has a reserve Hiab to keep the infeed going during these interruptions and as a standby against any snags that may crop up in the No. 1 machine. The loaders are operated from a separate cabin giving the operator a good view of the working area. ■

Article No. 5

Special Method for Sugar Cane



One of the main occupations in Guiana is growing sugar cane, but even today the work of the sugar plantations is not mechanised to any notable degree. One of the reasons for this lies in the method of cultivation. The crop is grown on undulating land featuring low ridges separated by water-filled ditches or canals. Besides playing a part in the water economy of the plantations the canals are used by tractor-drawn barges which carry the sugar cane away to the sugar mills. The rolling ground makes it impossible to use big, up-to-date harvesting machines. And in most areas the cane is still cut, collected and taken down to the canals by human muscle-power.

But it is a cardinal rule in sugar growing that the cane, once cut, must be got to the mill without delay, since the sugar content falls quickly if it is left lying in the fields. This points up the need for machinery capable of quickly collecting and loading the cane for dispatch to the mill. In line with this, trials are now under way at several points with various kinds of mechanical equipment, and some of the most promising of them are based on the Hiab Method.

One outfit consists of a HIAB 550 mounted on a tractor fitted with a special frame for the loader mounting, a counterweight and a specially designed bulldozer blade. In addition, the steering gear and shift lever of the tractor have been repositioned so that the driver sits "back to front" and controls all the functions of the outfit. The loader has a rotator and a hydraulic grapple with extra-long tines.

The sugar canes, which grow in rows, are cut down by teams of two men who each take three rows. They lay the cut canes crosswise in a common windrow between them. The loading machine, which works along the length of the windrow, crowds the canes together with its bulldozer blade. After travelling from three to five metres it will have collected a handy-sized bundle of sugar cane on and ahead of its blade. The grapple then takes charge and lifts the bundle onto a transport vehicle—a truck or a tractor-drawn trailer—moving abreast of the loading machine. The transporter takes the cane either to a canal barge or straight to the mill.

Using this method, an experienced operator can collect and load about 14 tons of cut sugar cane in 15 minutes, giving a daily capacity of about 350 tons. The outfit does an excellent job even in very rugged terrain. Another of the outstanding advantages of the Hiab Method in this context is that it gives a high capacity at a cost which is very low by comparison with large, highly mechanised harvesting machines. This means that the method should be able to offer such machines keen competition not only in the rather special plantations of Guiana but elsewhere as well.

There is a variant method which rests on the same principle but uses somewhat differently shaped attachments. It has a simple kind of "harrow" for sweeping the cut cane into bundles on the ground. The grapple on the loader has no cross-rib, enabling it to grasp the cane bundle on both sides of the harrow. The loading capacity of this rig is somewhat less, but the work of fitting out the tractor is greatly simplified since only very minor modifications are required to the vehicle itself. ■

Article No. 6

HIAB Catches On With French Fishermen

The fishermen of Port-Vendres, on the Mediterranean coast of France not far from the Spanish border, have adopted the Hiab Method to lighten their labours. Aboard their boats, which are usually equipped for sardine fishing although they sometimes go after tunny as well, they use HIAB 174s both for loading and unloading fish boxes when they're tied up alongside and for handling their nets. For dealing with the sardine nets the loader is equipped with a "Power Bloc", a hydraulically powered arrangement which is used both for reeling in the nets and the catch over the side and for holding the nets aloft on the homeward trip while the crew shakes the fish out of the meshes. The loaders on these boats are mounted aft of the wheelhouse, the kingpost being sited either athwartships or fore-and-aft. The oil pressure comes from a hydraulic pump driven by a separate diesel engine. ■

Article No. 7

Five Fewer Men At The Wine Presses

The 220 members of the Landerrouat vintners' co-operative in the Sainte-Foy district forty-odd miles east of Bordeaux have notably simplified an important stage in the work of wine-making with the aid of the Hiab Method. At their wine presses, one man equipped with one Hiab loader now takes delivery of the entire harvest as it comes in from the vineyards.

The grapes arrive in large tubs called "douilles". They are sorted by quality and growth into four classes, which are handled and pressed separately, so that each douille has to be routed to one of four reception points. This used to be done by four electric winches, which hoisted the tubs to the hydraulic emptying devices that tipped the contents into the presses. The job kept five or six men busy fulltime on the reception deck. When the Hiab Method was brought in two years ago they were replaced by one man who operates the loader.

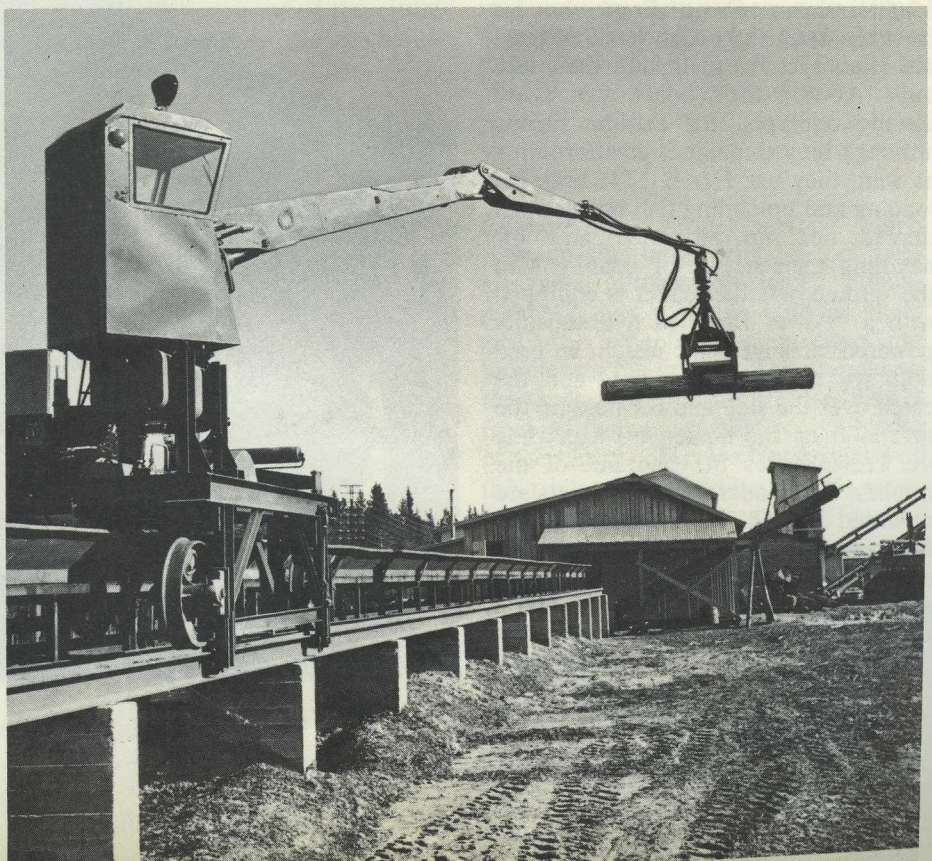
This labour economy becomes all the more important during the vintage, with grapes arriving at the deck 18 hours a day. Daily deliveries to the presses amount to between 400 and 500 tons, and a normal season's harvest in the district is around 6,000 tons. From this the vintners make five million litres of sound Bordeaux and "Cotes de Duras". And before long, Hiab will be taking a hand in making some of the other Bordeaux wines—a similar facility is currently being installed by the Sainte-Foy winegrowers' more famous colleagues in Médoc on the other side of Bordeaux. ■

Article No. 8

1000 Logs A Day 2000 Standards A Year

Balungstrands Sågverk AB, currently sawing about 2000 standards of timber a year, plans to double this figure, and has been working for a year on a new system of log intake. Timber supplies arrive at the mill by two trucks, each taking about 100 cu.ft. The trucks don't just tip the logs off on arrival—they unload them with their own HIAB 177 loaders, taking about 25 minutes. The logs are put down at right angles to the chain elevator which feeds them into the sawmill. Straddling the elevator way is a trolley mounting a HIAB 177 with a special cab. A geared electric motor drives it along the 50-metre way, while another electric motor drives the hydraulic pump that powers the loader. The outfit feeds the elevator with about 1000 logs a day, rotating every log 90° one way or the other so that it rides top end first. ■

Article No. 9



The Hiab shifts the tensioner from chain to chain, and the hydraulic pressure provides the force necessary to bind the bundles up tightly enough.

A HIAB That Never Gives Lifts

The firm of Mo & Domsjö at Örnsköldsvik, Sweden, uses a HIAB 177 in its pulpwood processing—yet the machine never lifts a single stick of pulpwood. It is mounted on a rail running the length of a 40-metre bunker, and moves along the rail with the aid of a hydraulic winch built into the loader base. Wrapped around the winch drum are three turns of a wire rope that is stretched between the end-points of the rail.

Complete parcels of pulpwood are transferred direct from the transport trucks into the bunker by an overhead crane. To ensure that the bundle will hold together when it is placed in due course in the water it has to be tightly bound with heavy chains. The chains are drawn tight by a hydraulic tensioner mounted at the tip of the Hiab boom. The job assigned to the Hiab is to move the tensioner and tighten one chain after the other. When the chains are quite firm the bundles are tipped into the water and the bunker is ready to receive more pulpwood. ■

Article No. 10

Rolloader Tackles A Delivery Problem At The Grass Roots

The Zandor Sod Company of Toronto, Canada, had a problem. The firm has specialised in instant lawns, delivered to the site in the form of turves. The product is transported on 13-metre-long trailers, and one load often comprises several deliveries going to different destinations. And Zandor's problem was to devise a fast and economical way of unloading the pallets carrying the turves.

One way was to send a fork lift truck out to the discharge point. This ensured a quick job of unloading but it wasn't an economic proposition except for very large deliveries. Another approach was to unload the turves by hand, but this took a long time even with several men on the job. It kept the transport rig tied up far too long, even on small deliveries.

A solution was finally found in the Hiab Method. The Atlas Polar Company of Toronto, Hiab's general agent in Canada, fitted Zandor's trailers with a Rolloader installation. It consists of a HIAB 173 with a rotator and pallet fork, mounted on a broad-gauge Rolloader frame. This enables the loader to travel the whole length of the loader. Using this equipment, the driver himself can unload a fully laden trailer in 20–30 minutes, with the turves remaining on the pallets throughout. Without the Hiab equipment it would take three men an hour's hard work to achieve the same result.

Now that Zandor has adopted the Hiab Method it no longer needs to send any special unloading equipment to the delivery sites, and yet it can discharge both small and large consignments with equal ease and economy. This new flexibility of handling means that even the small deliveries now represent profitable business. ■

Article No. 11

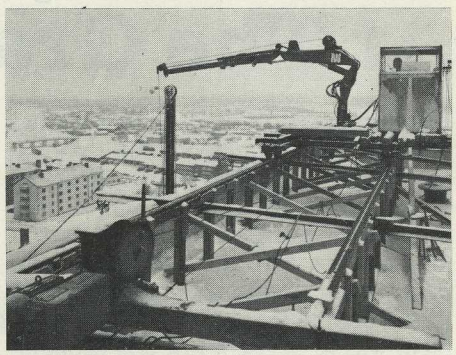
Method Hoists

Da Capo Presentation of "A Loader on the Roof"

Method No. 13 contained two pictures and a brief account of a HIAB 174 that was used for putting up the façade units on the new town hall in Kemi, Finland. That little item has brought in so many enquiries as to erection, drive unit, time and cost savings, etc. that we've now decided to recap and tell all we know of the matter, even though the loader has been taken down and the town hall officially opened long ago.

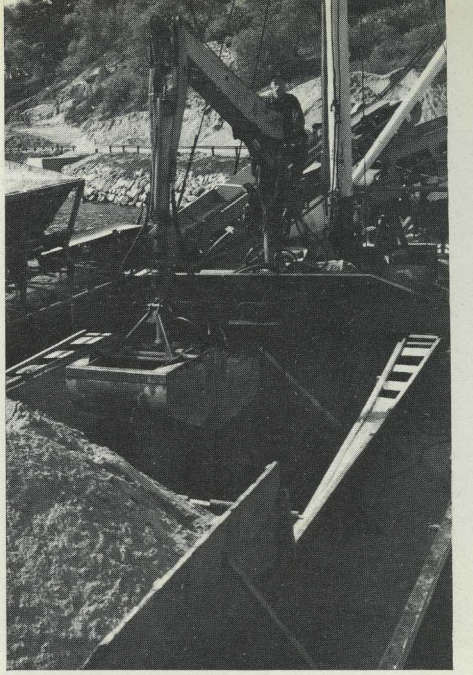
This loader, which was fitted with a winch, was mounted on a trolley which travelled along ten metres of track with a gauge of 2.5 metres, the rails being carried on girders about a metre above the roof. Between them, the track and the loader boom gave a working width of 20 metres. The trolley measured 3 × 4 metres and was constructed of stout steel joists. It moved on flanged iron wheels and was trammed along the track by a wire-rope winch. Besides the loader, the trolley carried a platform of concrete piles which served as a counterweight, and above the platform was a control cab. The hydraulic pressure came from a gear pump driven by an electric motor, both of them being mounted on the trolley.

Regrettably, we have not been able to get hold of any detailed data on the savings in time, labour or costs that the Hiab Method brought about in this case. All we know for certain is that the Hiab arrangement was cheaper than hiring and erecting an ordinary building crane would have been. And



when the town hall was finished the loader was transferred to one of the council trucks—thus saving still more money for the Borough of Kemi. ■

Article No. 13



A Rolloader Goes to Sea

Seaborne movements, where feasible, are the cheapest form of transport in most instances, especially for heavy and bulky cargoes—as long as you can devise a flexible means of loading and unloading. And that's something the skipper of this sand freighter, operating among the Stockholm skerries, has succeeded in doing. Using the Hiab Method he can manage his unloading all on his own—and the loading too at a pinch.

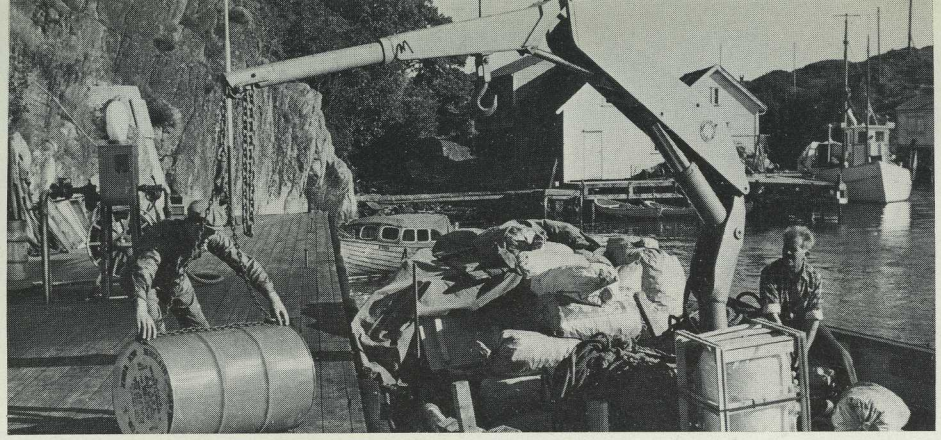
His equipment consists of a HIAB 177 with a rotator and sand bucket mounted on a frame athwart the hold. The frame has wheels which travel on rails the whole length of the hold. The loader moves by pushing or pulling itself along with its boom. The bucket discharges the sand into a hopper commanding a conveyor belt which carries the sand up onto the jetty or straight into a truck for the next leg of the haul. ■

Article No. 14

A Swedish Loader On A French Tractor In Southern Germany

The French firm CEMET makes a four-wheel-drive timber-skidding tractor that has been christened the "Grizzly". A test specimen now on trial in the forests of southern Germany has been fitted with a HIAB 550. The kingpost is 700 mm shorter than standard. In preparing to load, the driver about-faces his seat so that he has a good view. Time studies have shown that this outfit is capable of an excellent performance. ■

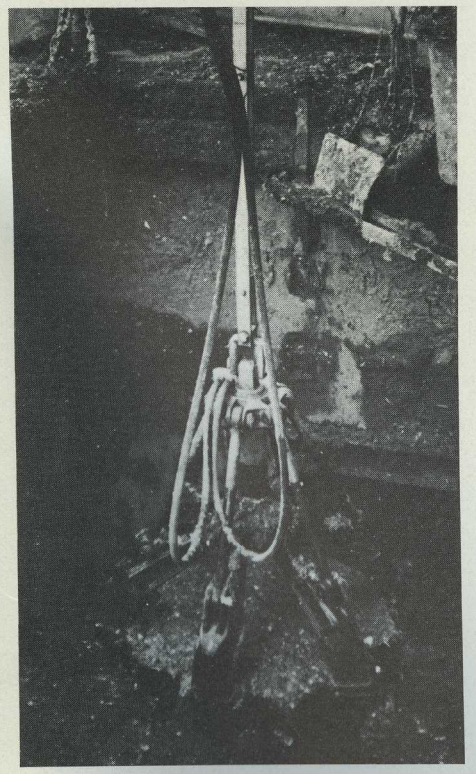
Article No. 12

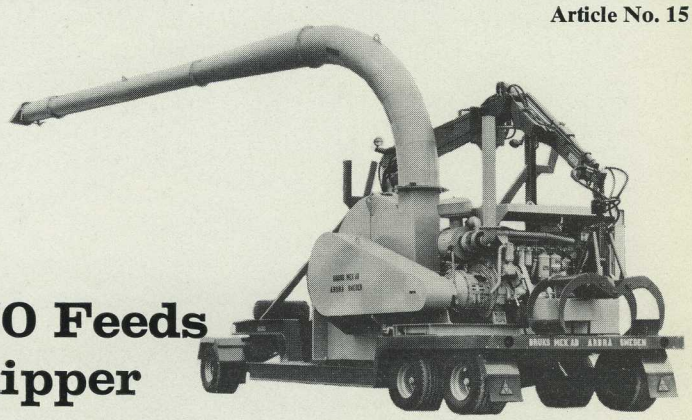


Scurrying Around The Skerries

A barrel of oil, a few sacks of cement, a pile of boards. With a HIAB 173 as the ship's crane it only takes a few minutes to discharge them onto the jetty somewhere among the outermost Norwegian skerries. The gains in time and the savings in labour help to keep transport costs down for the islanders and profitability up for the owner of this little general freighter. ■

Article No. 15





HIAB 570 Feeds Giant Chipper

Using a HIAB 570 with a grapple and rotator, one man manages the roundwood feed to this giant chipper, which can gobble 300 cubic metres an hour. Designed for trailing behind truck or tractor, the machine weighs 22 tons and can deal with roundwood up to 16″ at a rate of 90 metres a minute. It was made by Bruks Mekaniska, of Arbrå, Sweden, and was delivered to France. Another similar machine is on order, and there are plans for serial production. ■

Article No. 16

Non-stop Pipeline Construction

In England they're now working on a vast pipeline project. A grid system comprising thousands of miles of heavy-gauge pipeline is being constructed over the whole country to distribute the natural gas now being tapped from the huge reserves beneath the North Sea off the coast. The gas is to be distributed from a terminal in Bacton, Norfolk. In due course it will deliver 85 million cubic metres of natural gas a day—almost three times as much as the entire daily consumption of the country at present.

The pipeline builders must be able to keep going without interruption whatever the weather—but the welding of the pipe joints can't normally be done when it's raining. That problem has been licked with the Hiab Method. Hiab loaders, 293 model, have been mounted on the tracked vehicles carrying the welding equipment. The loader boom holds a big, fenestrated tent over the site of the weld. The tent shelters both the welders and the weld from rain and wind and allows work to proceed without a break. The boom also carries the cables from the welding unit. When one joint is finished the vehicle moves along the line to the point where the next is to come. And thanks to Hiab, the pipeline grid is rapidly taking shape. ■

Article No. 18

A HIAB Pays for its Keep — In Two Hours a Week

A loader doesn't have to work five days a week for the Hiab Method to show a profit—that's been proved time and time again. One example is offered by a stationary HIAB 173 with a six-bladed grab bucket that is used at a paper mill in England. It's in action only a couple of hours a week—emptying a waste tank. Wet, slimy waste collects in the tank and has to be cleaned out two or three times a week. The company used to rent a mobile crane for the job, but the Hiab Method proved to be just as efficient and far cheaper. The tank is emptied by one man only, and since the Hiab is always in readiness beside the tank the job can be done at any time at all. The company saves on crane rental and never loses time in waiting for the rented crane. ■

Article No. 17


745 ALLIS-CHALMERS