METHOD

HIAB

Method No. 15

A magazine featuring the Hiab Method and its applications.

Contents:

HIAB Method No. 15

A magazine featuring the Hiab Method and its applications, published by HIAB, Hudiksvall, Sweden.

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Cover:

From the HIAB 950 demonstration in Västerhaninge. The loader is lifting a Bedford chassis in the picture. Weight: An impressive 4 tons.

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A better Method

It is now five years since the first issue of Method appeared. Since then we have published three issues a year. Thus, we are now up to number 15.

Imitating the method that it deals with, the magazine has changed a great deal during the time that has passed. We who work with it hope it has improved. An obvious development can be seen in one respect. The magazine is gradually reaching more and more readers. The first issue had a circulation of a few tens of thousands. Method has since expanded to many more countries, and the total combined editions of the last issue in the various languages easily reached 75,000 copies.

From this edition on, Method will become available to a large number of additional readers by being translated, for the first time, not only to English, German, and French, but also to Japanese. The magazine thereby takes a long stride upward, to considerably more than 100,000 copies.

As a result of the steady expansion of Method to more and more readers throughout the world, problems have been created for us, the editors. What shall we write about and how shall we write it so that the greatest number will profit as much as possible from the magazine? What method problems exist in New Zealand, and how can we write about them so that even readers in Germany or Japan will benefit from reading the article? A periodical of this kind works as an informational channel in only one direction, unfortunately. With it, we in the Method editorial staff can extend our viewpoints and the experience we have garnered to hundreds of thousands of readers, but all of these readers have little possibility of reaching us with their views, criticism and wishes.

We are making an attempt here to set in motion a flow of information in the other direction as well.

We want to invite all our readers to write to us telling about their work, their problems and solutions, desires, viewpoints, and by all means, criticism. Tell us what you would most like to have us report on in Method. Or write something yourself that you would like your colleagues around the world to read. We promise to publish as many such contributions as we can find space for. And send photos!

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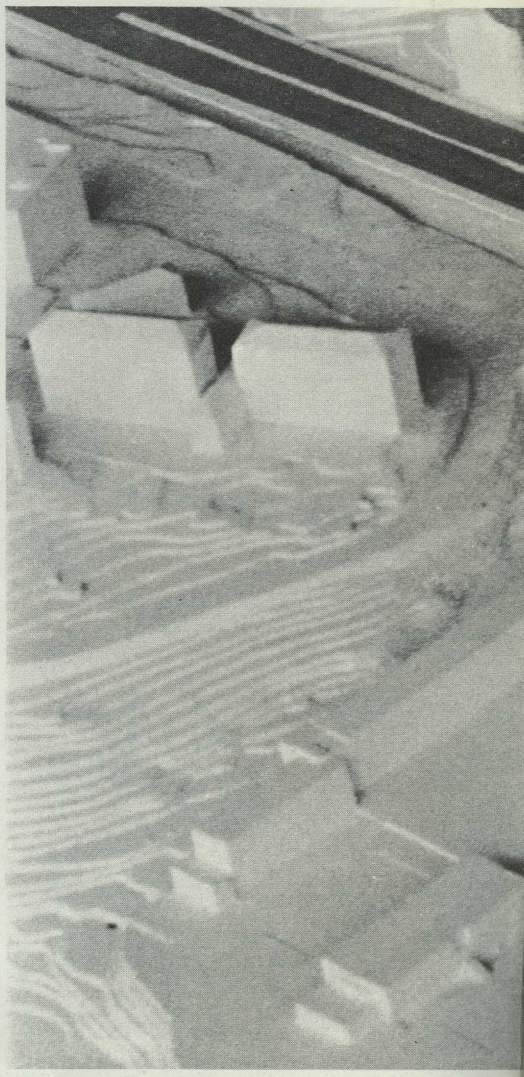
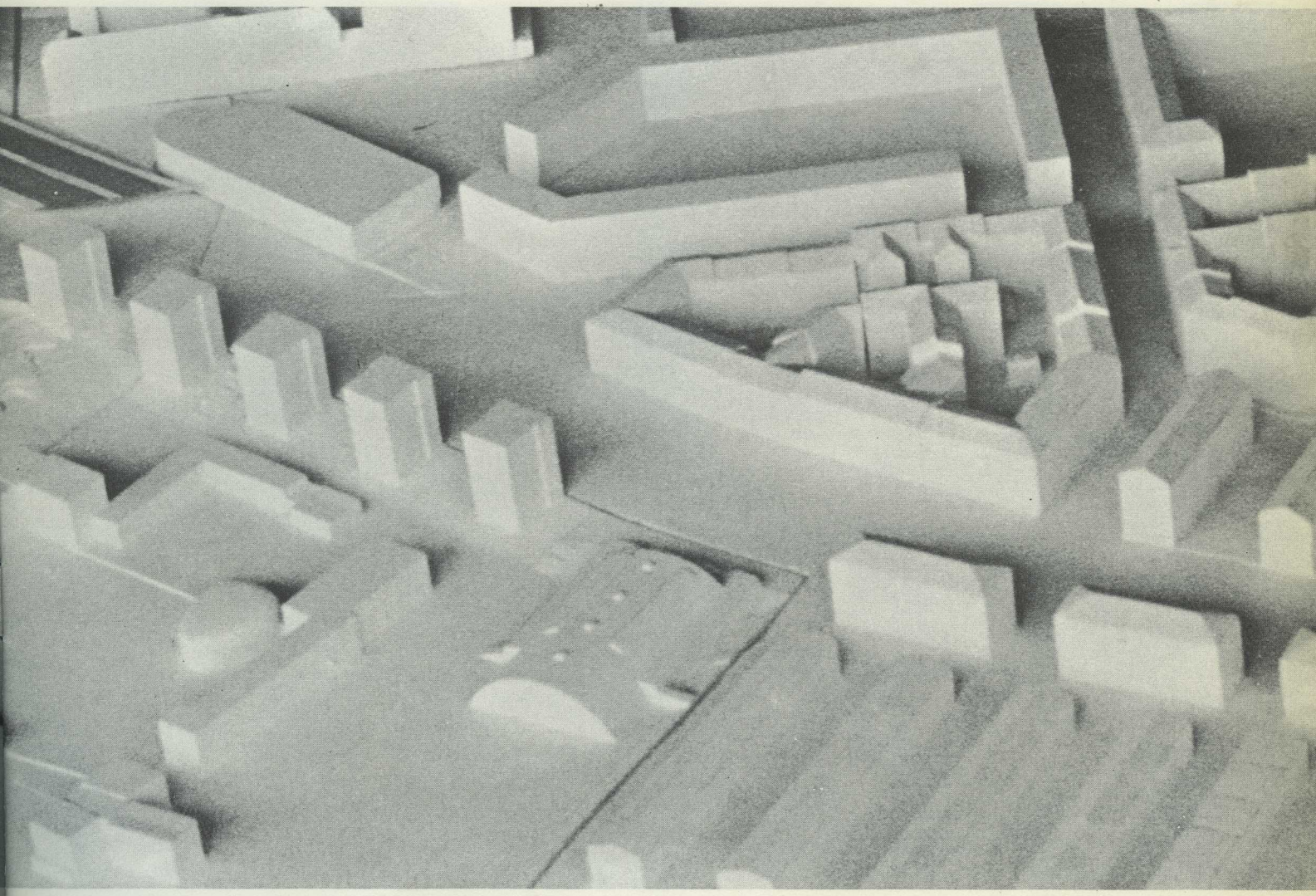


How will we be building in ten years?

Ingmar Sjölander (38). Innovator. Free lance writer,
and a fresh breeze in the building debate. Here he develops his view of future construction. Future transport handling.



Concrete, poured or in pre-cast elements, has long been the best seller in the construction field. New materials and forms have difficulty penetrating the market. The reason, very simply, is the law of inertia. The prevailing scepticism toward new materials, new methods.

But developments are progressing more and more rapidly. And right now the signs seem to indicate that we are facing a building revolution.

New systems for the transmission of information, new ideas for goods and material transport will spring up.

This development is dependent, to a great degree, on the massive relocation from the great cities to surburban centers of population density. To regions with much greater land area. This creates a tremendous demand for flexibility. That coupled with an esthetic revaluation. A new unconventional conception of how we are going to live will lead to a complete transformation.

The new view of the cost picture, in which total operational and amortization costs are minimized, will have a powerful impact. A probable consequence will be that foundations for highways and buildings, as well as pipelines, will scarcely reach down to frostfree depth in the future. Frost damage will be eliminated through the use of electric heater cables and perfected ground insulation. The resulting profits will lie, above all, on the transport side. Excavation as mass removal will be reduced to a minimum.

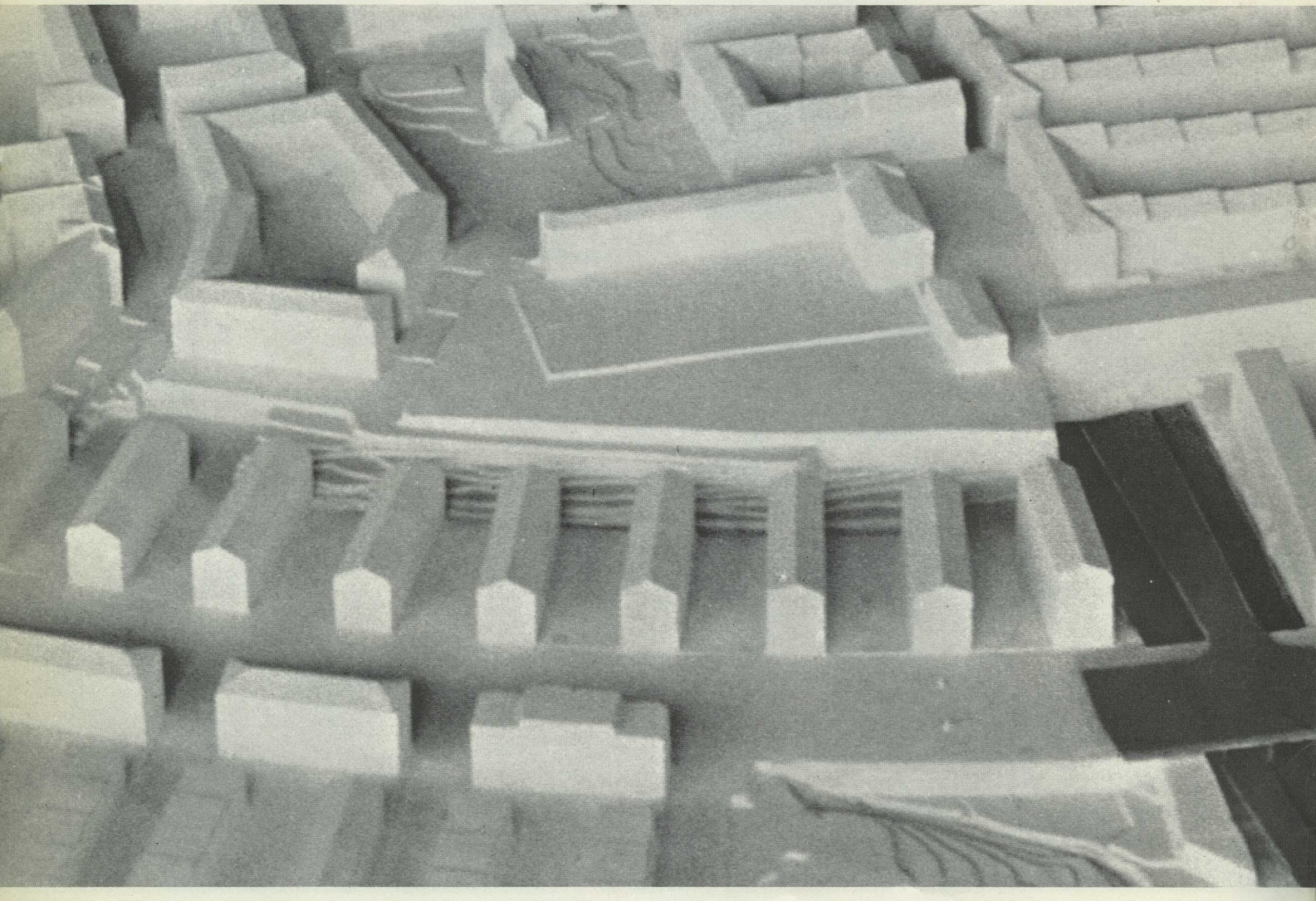
Successful attempts in which this technique was applied to small and medium sized houses have already been carried out. The foundation work consists only of levelling and packing the ground. Shallow trenches are dug for the soles which are to take up the static loads. Mineral or glass wool is laid directly on the flattened ground surface. Particle board is laid on top of this insulation and then synthetic wall to wall carpeting. By using this technique, not only transport, labor and costs been reduced to a minimum, but a completely flexible foundation has also been achieved which drastically simplifies possible future modification of the building by completely eliminating trucking and unnecessary transporting.

A further step toward flexible building is achieved by designing walls and framed floors as a kind of "super Erector Set". The skeleton is completed with elements consisting of light metal plus sheet steel, or plastic plus wood, along with material for "softening" the environment. Heavy and inflexible concrete will be as good as completely supplanted.

There is also much to indicate that a soft, plastic, smoothly rounded interior environment, of which the furnishings constitute an integral part, will become the future tone in homes as well as public buildings.

Transport—erection

These changes will, of necessity, gain great influence on the practical work within the transport sector. Many tasks will disappear and completely new ones will come into being. If you want to get literally mudded up you could say that "the manufacture grade of the transports" will, generally speaking, increase fundamentally. More expensive, lighter, and more precision made products will become the objects of relocations, not just once, but to the



extent that the dynamic society requires. This new structure is also going to mean that those who transport these highly refined products will, in all probability, also have an installing function, since it is possible, with well developed installation equipment, to fit the precision products directly into their proper connections with a minimum of effort. This development will also demand a highly qualified labor supply, continuous retraining and additional instruction of the personnel occupied within the transport and erection field.

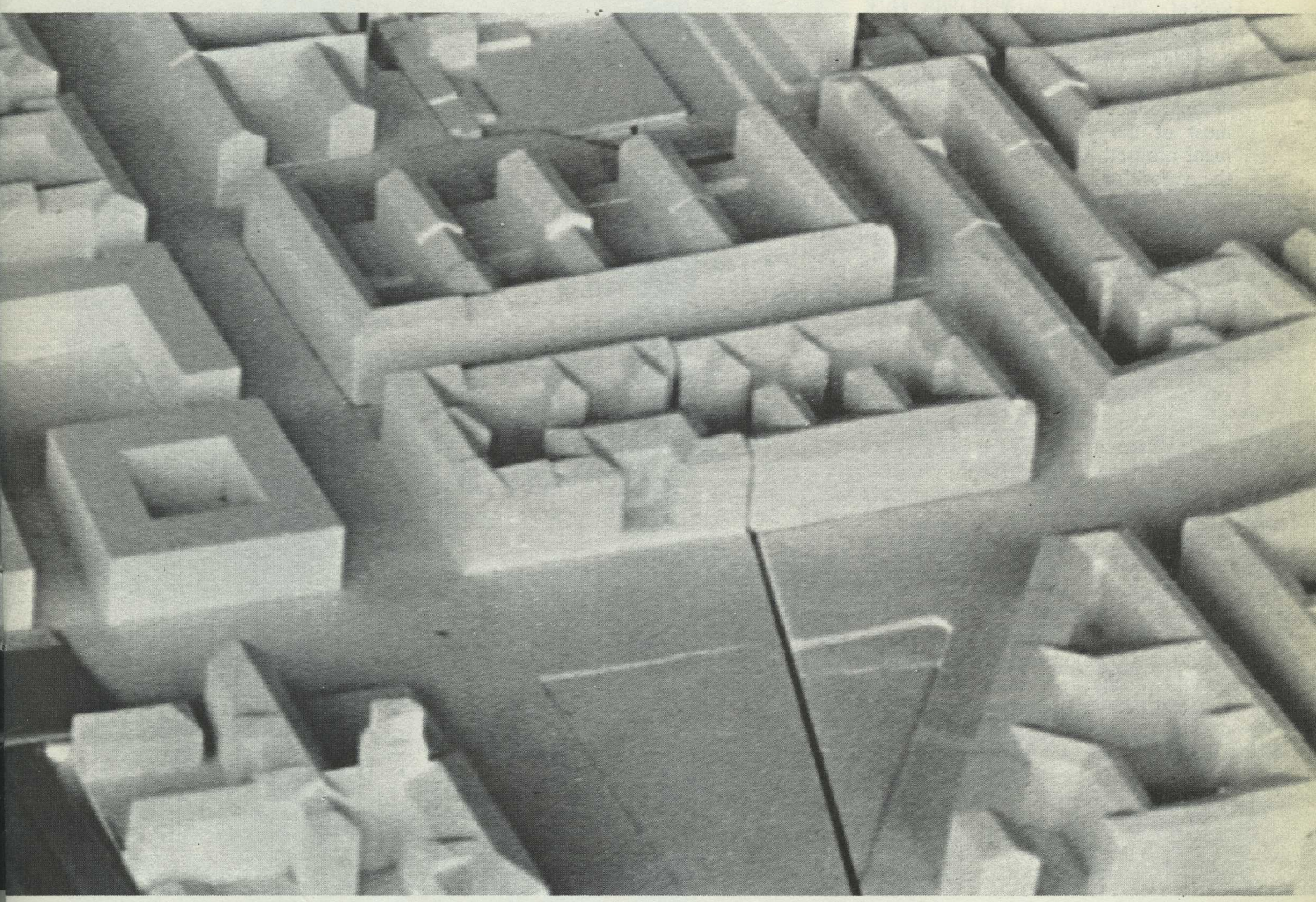
Perhaps the most essential change in handling considerations will be that the transition from inexpensive but heavy concrete elements of relatively low precision to more expensive, lighter and highly refined "Erector sections" will mean that the capacity of the handling equipment to transfer a load with precision will be of greater importance than a large lifting capacity. In connection with the development of lightweight building a transition will occur from large building cranes to precision erecting equipment in a lightweight class. New, light frame floor designs integrating the support function with installation components and systems can be set in place and joined with the help of cranes with a relatively meager lifting capability but with great precision and flexibility in moving the load. Equipment with a lifting factor in the range of 2–15 tonmeters should be able to handle 90% of all lifting in future lightweight construction. Prefabricated roof beams will be lifted into place with the help of cranes with extra long reach and prefabricated sections with good heat insulation will be installed using the same equipment. Prefabricated kitchens, storage spaces, laundry rooms, and finished bathroom or sauna sections will be lifted into the abovementioned frame construction directly from the transporting vehicle. In many connections cranes mounted on a terrain type chassis of one form or another will be an effective alternative to truck mounted or rail carried cranes.

Planning decisive

Plastic swimming pools, filters and small individual purifying units will also be set in place using the same installing equipment. Similarly, pavilion schools, childrens' day schools and summer homes can be built "lightweight" in a very short time with the help of one or more vehicle mounted cranes.

One precondition for economical construction according to this "Erector method" is detailed and instructive planning and erecting directions and carefully established network plans for separate projects. The examples cited show that essentially all buildings can be put up more rapidly, easily and less expensively with light, mobile precision cranes.

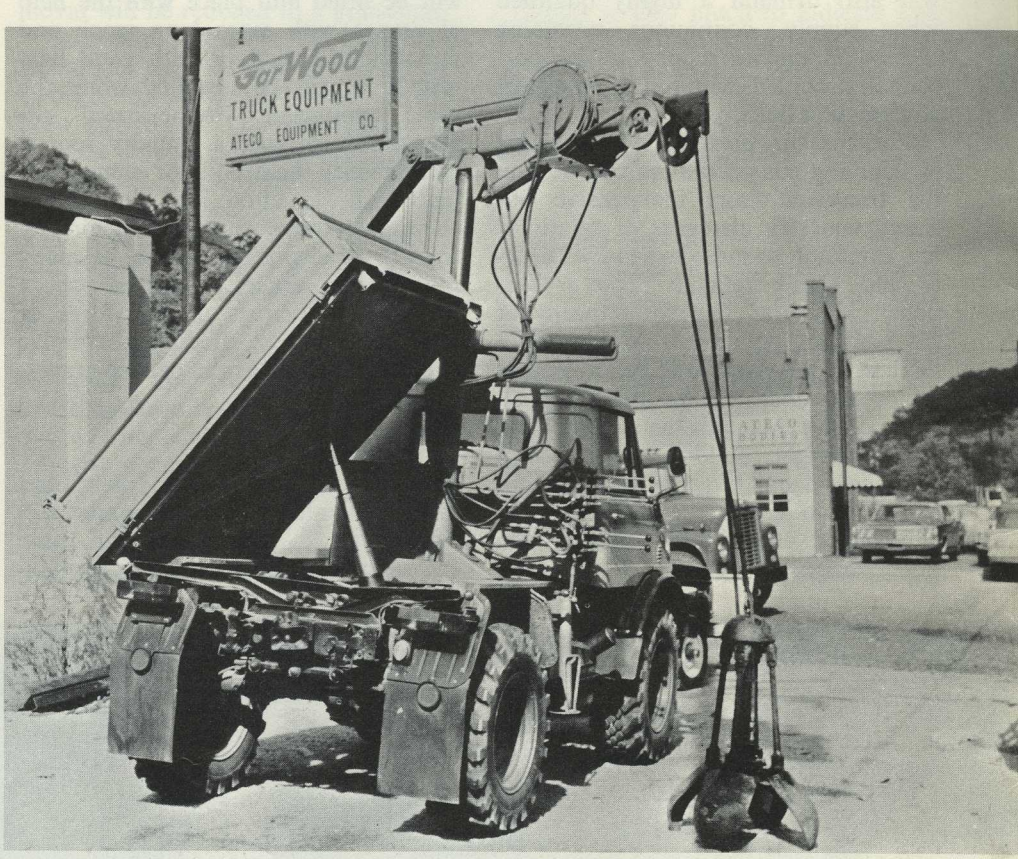
Even indoor swimming pools, hockey rinks, small and medium sized industrial premises can be built using module construction, and far more rapidly if the system is designed with the new handling methods in mind, based on light mobile equipment for precision handling. Equipment with a reach which three dimensionally—diagonally through space—is on the order of 52 feet will probably represent an optimum with regard to the cost of procurement and practicability. In two sided work, such equipment should be able to be used to erect buildings more than 100 feet in width. ■



An effective utility vehicle: snowblower in winter catch-basin cleaner in summer

An efficient combination for utility vehicles for communities and municipalities has been developed through the cooperation of Hiab in the U.S. and Ateco Equipment Company. The vehicle, which was recently exhibited at an American Public Works Show in Pittsburgh, consists of a Unimog with a HIAB 193 and special equipment for cleaning catch-basins. This special equipment is made up of a hydraulic bucket and hose reels that automatically unwind and rewind as the bucket goes down into the catch-basin and lifts out a load. This is the most positive way of cleaning catch-basins developed to date.

In the winter the unit is equipped with a front-mounted snowblower which can clear 600 tons of snow an hour. In summer as well as winter, the bucket can be removed and the Hiab loader used for ordinary material handling. The entire unit costs less than a snowblower vehicle alone of comparable capacity, which stands idle most of the year. The Hiab equipment aroused great positive interest at the exposition. ■



Mosquito control with the Hiab method

On the New Jersey side of the Hudson River in the U.S. is located North Bergen, an area in which large swamps are prevalent. In these swampy areas mosquito larvae thrive in vast numbers which, if allowed to mature undisturbed, become a plague for large areas of New York and northern New Jersey. In order to keep the mosquitoes down, drainage ditches have been dug, but these have to be dredged out periodically to remove clogging vegetation. This posed certain problems since the swampy ground will not support any ordinary excavating machine. The answer was found in mounting a HIAB 177 with clam-shell bucket on a light tracked vehicle called a" Bombardier". Hydraulic outrigger legs with long extension provide the required stability when the loader is operating. ■

Hiab reduces the cost of railroad maintenance

When the Pittsburgh and Lake Erie Railroad (a subsidiary of the Penn Central) had a Hiab loader installed in one of its service trucks, a unit was obtained which could work just as flexibly and effectively close up to the vehicle as with the boom system fully extended. This was a great improvement over the cranes with fourteen foot fixed boom and winch which were previously used. With that equipment it was impossible to lift effectively close by the side of the truck. They were also a drawback when working under bridges or other overhead obstructions, and there was a lack of control over loads hanging and oscillating on the end of the winch cable. The advantages of the Hiab equipment were so apparent that today the railroad has two HIAB 173's, fifteen HIAB 174's, and two HIAB 950's have been ordered.

The Hiab loaders are primarily used by the Maintenance of Way Dept. Five-man work crews use a service truck equipped with a Hiab loader and three-way dumper to replace rails, frogs (track switching sections) and ties. The material is picked up in the yard and loaded on the truck by the loader. For the frogs there are special carrying brackets mounted on the truck. These trucks also have high rail wheels mounted on them so that they can drive out on the rails directly from the yard to the replacement location.

Hiab loaders are also used for a great deal of other work on the railroad. The Signal and Communication Dept. uses them to install and replace switch boxes and overhead signal lights, and the Carpentry Dept. recently received a Hiab loader which they use for general goods handling. All of these loaders are equipped with simply a load hook, but for handling the frogs and rails special attachments are used.

A 950 for wrecking work

One of the HIAB 950's which is on order will be mounted on a wrecker truck to be used for repair work in the field on cars and locomotives. Besides the loader, the truck will also have an automatic rivet gun, a welder, and an air compressor. The other 950 loader will be used by the Signal and Communication Dept. and is to be equipped with a removable man-basket and a removable auger. The latter is mounted on the outer boom and will be used for soft-earth digging along the right-of-way.

The railroad's Hiab loaders have required a minimum of service and repairs. The original loader, for example, has been in the shop once since it was delivered in 1966, and then only to have a control lever replaced.

Hiab loaders have meant a fundamental simplification and reduction of work and material handling. Against the background of rapidly rising labor costs, the savings which can be acheived in repair and maintenance work are quite considerable. ■

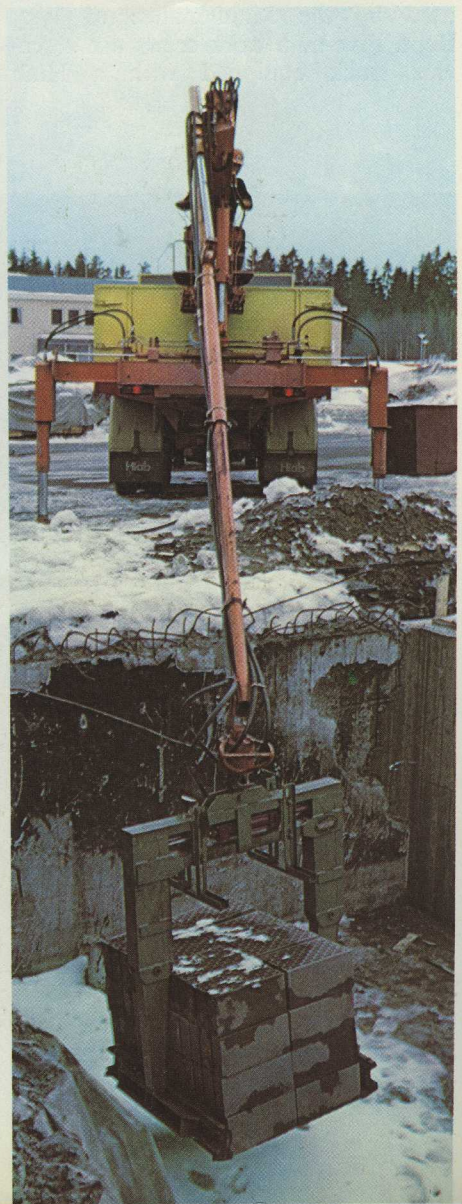
HIAB 950 Makes its Debut

A big Hiab newsmaker recently made its official debut when the HIAB 950 hydraulic loader was presented for the press and professional people from Sweden, Norway and Finland, 60 in all, who were invited to Hiab's service workshop in Västerhaninge, south of Stockholm.

The new loader is not entirely unfamiliar to Method readers. An article in the previous issue reported on the testing of a number of prototypes which went on for nearly a year in different parts of the world, the United States, Norway and Holland in particular. The results of this testing show that the new loader more than fulfills the expectations of its designers. With its great lifting capacity—9 ton-meters—it opens entirely new fields for application of the Hiab method, especially in the construction transport sector. If a truck with a hydraulic loader can unload building material directly into the foundation or place it in the building, an extra transport step on the building site is eliminated. But since development is in the direction of increased application of prefabricated building elements, great demands are made on the lifting capacity and reach of the loader. That is one reason why Hiab was motivated to develop a larger and more powerful loader model.

But even in piece goods handling there are many areas of application for a loader with greater lifting capacity and reach. By handling and delivering shop equipment and machines in larger sections for example, assembly work at the delivery site is reduced and savings are realized in both time and money. A large number of Hiab loaders are also delivered for stationary mounting, so that the HIAB 950 with its long reach—29′ 6″ with extra boom extension—and greater lifting capacity, creates many new possibilities here as well.

That transport people both in Sweden and abroad realize the potential of the new loader is evident from the interest it aroused even before it was introduced. Scarcely had the article describing the testing been published in Method before inquiries and orders began flowing in in large numbers. ■



TECHNICAL DATA FOR HIAB 950

Outreach, standard ..... 5.0 m (16′ 5″)

Extension boom ..... hydraulically controlled travel of 1.6 m (5′ 3″)

Extension boom, special ..... A—Total boom length 7.0 m (23′)
B—Total boom length 9.0 m (29′ 6″)

Lifting height, measured from lower edge of slewing housing:
A—with standard 5 m boom, 6.35 m (20′ 10″)
B—with 7-m extension boom, 8.25 m (27′ 1″)
C—with 9-m extension boom, 10.15 m (33′ 4″)

Lifting capacity ..... At radius 1.9 m (6′ 2″) 5000 kg (11000 lb.)
At radius 2.3 m (7′ 6″) 4000 kg (8800 lb.)
At radius 2.4 m (7′ 10″) 3750 kg (8250 lb.)
At radius 3.4 m (11′ 2″) 2650 kg (5830 lb.)
At radius 5.0 m (16′ 5″) 1800 kg (3960 lb.)

Working pressure for the hydraulic system ..... 140 kg/cm² (1990 psi)

Lifting speed ..... Approx. 0.42 m (1′ 4″) per sec. at an oil throughput of 40 litres (8.8/10.57 Imp/US gal.) per min.

Slewing angle ..... 410°

Slewing speed ..... Approx. 21° per sec. at an oil throughput of 40 litres (8.8/10.57 Imp/US gal.) per min.

Slewing torque ..... Approx. 1800 kgm (13,000 lb.-ft.)

Max. permissible pump capacity .. 40 litres (8.8/10.57 Imp/US gal.) per min.

Oil tank ..... separately mounted, approx. 100 litres (22/26.42 Imp/US gal.)

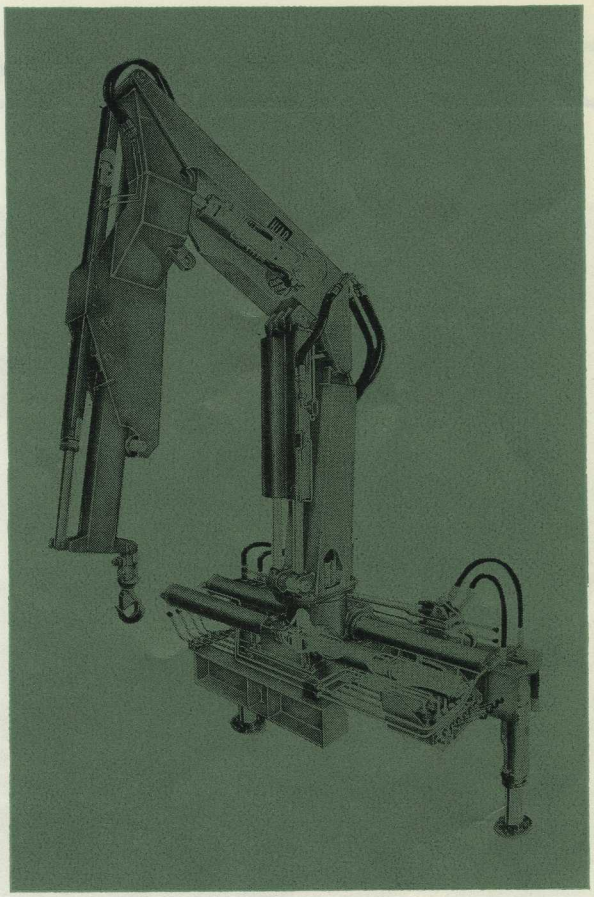
Weight:

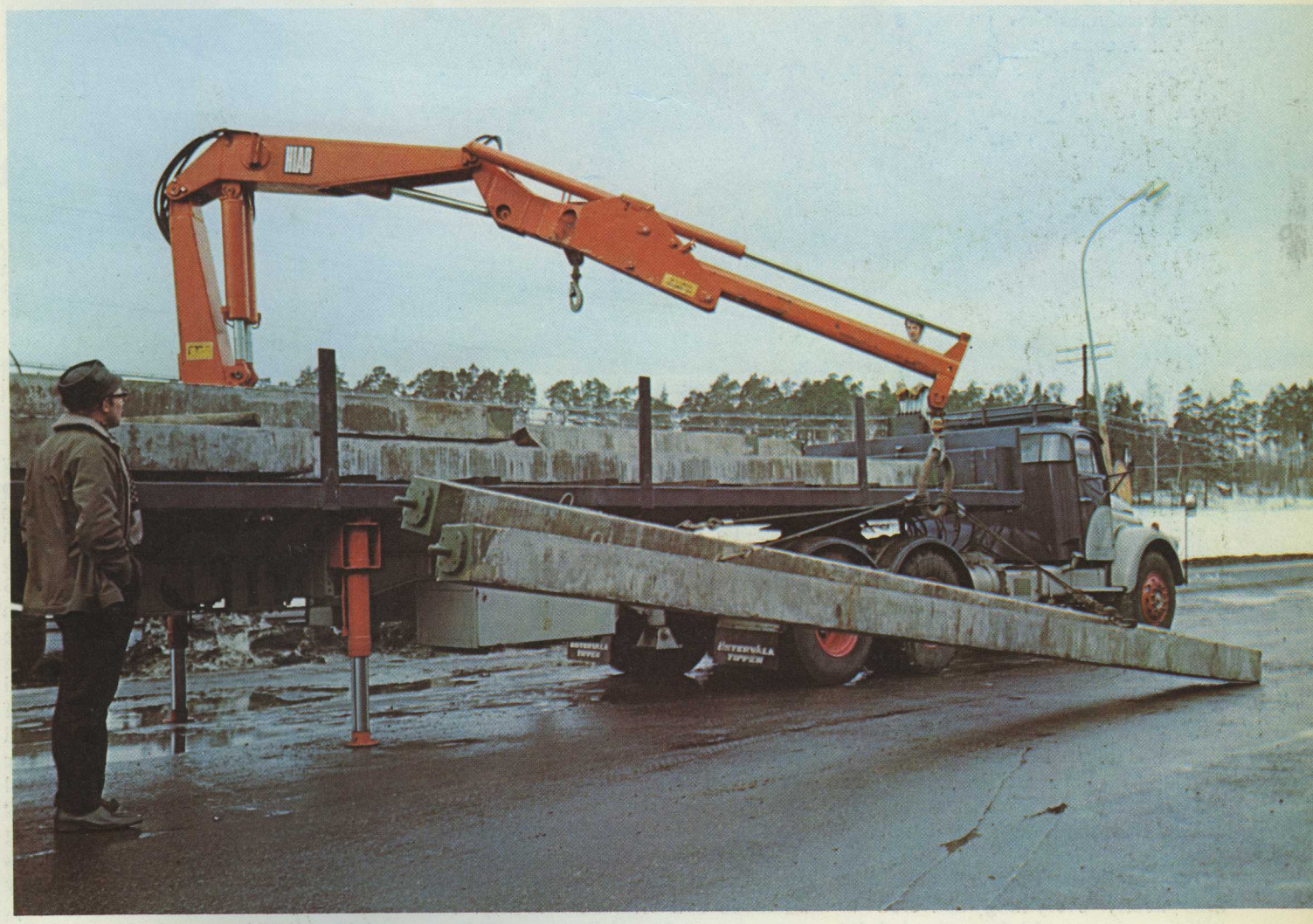
Loader without bedplate	1090 kg (2398 lb.)
A. Bedplate and mounting parts	300 kg (660 lb.)
B. Pump equipment	30 kg (66 lb.)
C. Oil tank with oil	160 kg (352 lb.)
Total*	1580 kg (3476 lb.)

* To this total is added an additional weight of 140-250 kg (309-550 lb.) depending on the outrigger leg option.

A. Overall width of loader in travelling position. Mounted on bedplate, incl. outrigger legs (hydr. extensible and retractable) ..... 2345 mm (7′ 8″)

B. Overall height of loader in travelling position, measured from the lower part of the bedplate
Standard loader body ..... 1920 mm (6′ 3″)
Loader body extension ..... 2220 mm (7′ 3″)





The times are changing even

Hiab steps up the pace of construction deliveries

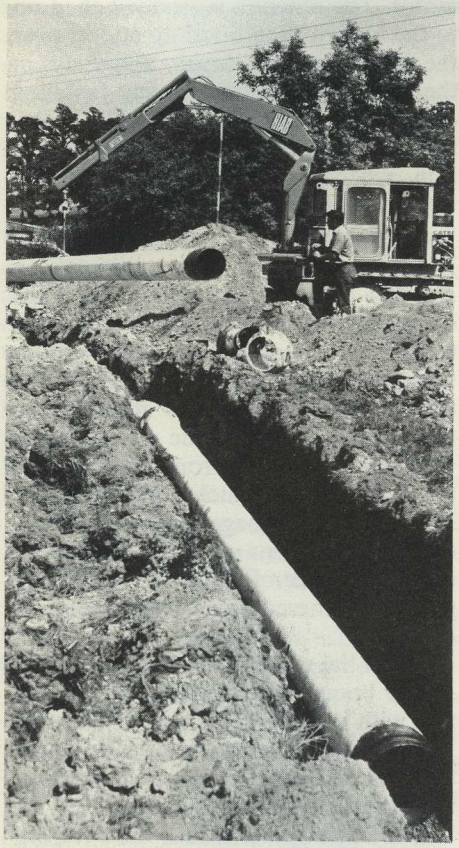
The times are changing even in sovereign England. It's not enough that the foot and inch are yielding ground in favor of the metric system and that plans are being carried out to convert pounds, shillings and pence to a decimal system—at a leisurely pace, certainly, but none the less determinedly. The pleasantly cosy home coal fire has also been encountering serious competition in recent years from central heating, which is being installed in more and more English homes. This development has drastically changed the activities of wholesalers making deliveries to building contractors and pipe-fitters.

As long as the English kept to coal fires nearly everything delivered to building sites could be unloaded by hand by the truck driver alone or with the help of someone from the building if need be. But unloading a home furnace weighing half a ton is not that easy. To lower one of those to the ground manually requires considerably more manpower than is ordinarily available on a modern homesite, which usually occupies only one or two people full time.

Rowe-Dodd Ltd. in Liverpool, one of the largest building material wholesalers in northwestern England, has solved the problem by using the Hiab Method. Three of the firm's trucks, Ford D-750's, have been equipped with HIAB 293 loaders. The vehicles carry a maximum load of 6 tons and make 20 to 40 deliveries on each trip. The company makes deliveries within a large area comprising all of Lancashire, as far as 60 miles from Liverpool. Over such distances it is essential to keep delivery times to a minimum. Thanks to Hiab loaders, the driver can avoid any waiting time at the buildings. He can take off a half ton load in 2 to 3 minutes alone, thereby achieving the highly efficient vehicle use that the company set as its goal.

The deliveries vary in both size and weight, from individual packets of screws to entire crates of polished glass, and Hiab loaders are used for everything that the driver can't unload quicker or easier by hand. In spite of the fact that the average load is getting heavier and heavier, Rowe-Dodd has proved that unloading at the delivery location can be done more easily, quickly and inexpensively with the Hiab Method. ■

in sovereign England



Hiab-Cat Combination for fast pipelaying

Hiab-Caterpillar has proved to be a powerful combination when it comes to activity like Western Excavators Ltd. applies itself to. A Caterpillar D4 has been equipped with a HIAB 174 and is used to lay heavy gauge water pipelines.

And Western Excavators uses water in enormous quantities. The company is occupied with the extraction of kaolin from the rich deposits located in the area aroud St. Austell in Cornwall. The kaolin is washed loose with water, huge quantities of water, at high pressure. No less than 3000 pumps are used, drawing a combined power of 6 MW (6 million watts), and each of the hoses used in the clay pits sprays out nearly 1320 gallons a minute at a pressure of over 285 psi.

In order to meet the steadily increasing demand for water, the company has to perpetually exploit new ground water reserves and lay new pipelines up to the kaolin deposits. The pipelines consist of heavy gauge plastic pipe sections fully 30 feet long and weighing 133 pounds, which are placed in shallow trenches using the Hiab loader. When the pipe sections are connected up the trench is backfilled using the Caterpillar blade. This method is easier, faster and less expensive than other pipelaying methods.

Hiab loaders mounted on 4-wheel-drive Bedford and Leyland Comets are used for pipelaying in the clay pits themselves. These vehicles can get about almost everywhere in the pits and can even ford the clay torrents without bogging down. They carry an average load of 5 tons of plastic pipe, which is deposited with great precision alongside the course of the new line by the operator and a helper. The whole job usually takes only a day and can sometimes be taken care of in a single morning. ■

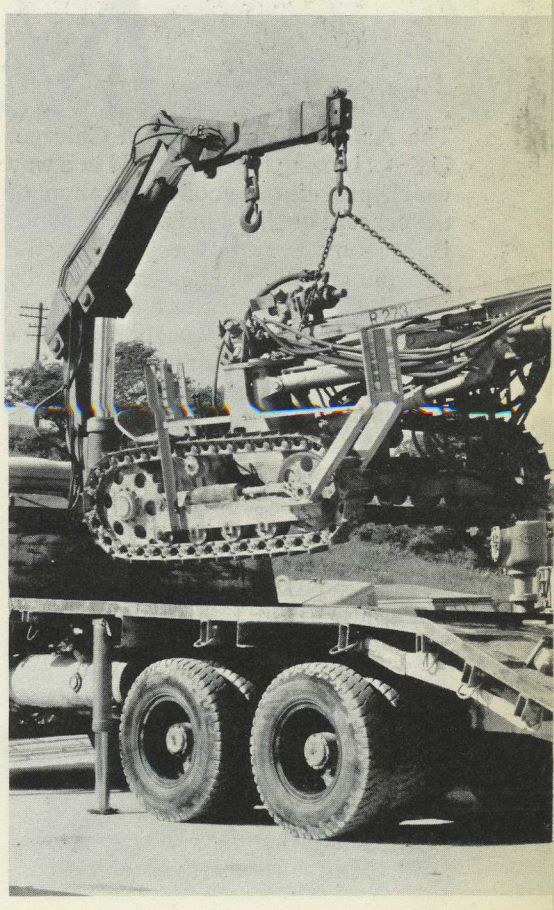
3000 machine transports for 1/3 the previous cost

— The Hiab is the most versatile and constantly utilized piece of equipment in our entire machine park—says Mr. W.A.H. Cratty, head of the contracting concern Mid-Cornwall Contractors Group of Companies, in Cornwall, England. Using the Hiab Method one of the member companies, Cornish Road Services, has successfully reduced its transporting costs in Cornwall and south Devon by as much as two-thirds.

The company, which has a large vehicle park of low trailers, dump trucks, and ordinary semitrailers, has specialized in transporting road building machines, rock drilling machines and other construction equipment between different work sites in south-western England. One of the vehicles, an Albion Riever, is equipped with a HIAB 506 Titan mounted behand the cab. The loader is used to load and unload machines and equipment weighing an average of 2.5–3 tons. Most often it is a question of diesel engines, transmissions, rock drilling machines, cement mixers, compressors, and the like.

Previously, anyone who wanted to move equipment of this kind had to call in a mobile crane for the loading, and a similar crane for the unloading at the new work location. These cranes, which are usually mounted on trucks, are in the 10 ton class. They cost fully $ 12 an hour to rent and the minimum rental is usually four hours. Thus, the cost of loading and unloading alone was at least $ 100, while the average usually lay somewhere around $ 150.

The Hiab unit, which can be rented for a minimum of two hours, can manage the entire job—not only loading and unloading, but also the transporting itself—for about one-third of that cost. This equipment team can manage an average of nine loads a day in an area with a 36 mile radius, but 90% of all transports occud in the area 9–12 miles from Roche, where the firm is located. The loader was brought in for the first time in January 1969 and by the end of the year it had handled more than 3000 loads, of anything from heavy gauge gas lines to tracked vehicles. ■



Quality handling

The Andrew Corporation in Chicago, U.S.A., is using the HIAB 174 in a way which provides a good illustration of the concept quality handling. The goods being moved are expensive, fragile, and difficult to handle, and must be placed with great precision. In addition, since converting to the Hiab Method the company has realized considerable savings and reduced the risk of damage in connection with the actual handling.

The Andrew Corporation designs and manufactures equipment for radio transmission, including antennas in a wide variety of different models and for almost any purpose. This is a technically highly developed activity bordering on pure research. More than 20% of the company's 650 employees are occupied with new designs and development work. A large proportion of the antennas produced are "tailor made" to suit the special needs of a particular customer, and all of these must, of course, be very carefully tested to ensure that they exactly correspond to the customers' specifications. Congestion in the atmosphere, presently one of the greatest problems in radio communications, creates a steadily increasing demand for greater precision and even finer tolerances.

Short body—long boom

It is in connection with the testing of these antennas that the precision and flexibility of the Hiab loader are displayed to advantage. On a 400 acre, relatively undisturbed area in Orland Park, outside Chicago, the company has 8 test towers up to 58½ feet high on which the antennas are mounted on revolving bases. Under the base is situated a testing room with sensitive instruments to measure and record the different test values for the antennas.

The antennas to be tested are lifted up to the base on the top of the tower by a HIAB 174 mounted on a platform built out from the tower, about three feet below the top. The loader body has been shortened so that the loader doesn't stick up above the tower and interfere with the test results. The loader is provided with an extra boom extension giving it a maximum reach of fully 29 feet 6 inches, and a hydraulic winch mounted on the boom. The oil pump is driven by a 12 hp Wisconsin motor. The antenna is first winched up to the loader, then lifted up and in over the base atop the tower and held in the right position while being fastened down. The loader is used again to repeat the process in the reverse direction when dismounting the antenna after completion of the tests.

Fast yet exact

Even under favorable conditions an antenna lift of this kind is a risky undertaking. The large bowl-shaped antennas act as affective wind catchers when hanging on the cable beside the tower. Two men have to stand by on the ground holding guide ropes to prevent the antennas from striking the tower if the wind catches hold of them. Even minor damage can completely destroy an antenna costing thousands of dollars. Therefore, it is essential to get past these precarious moments quickly.

When the antenna finally reaches the loader boom, the oscillation decreases, and with it the risk of possible damage. Then it is only a matter of placing the antenna exactly in position on the base with the help of the loader.

The Hiab loader is also used for lifting testing room instrumentation which frequently has to be changed, and for taking down the base rotation machinery, which weighs a ton, for service.

Safer, less expensive

Before starting to use the Hiab Method to handle the antennas, 15 ton mobile cranes with operators were rented for the same purpose. The cost was $ 36 an hour and the minimum rental was four hours. Consequently, the combined cost for lifting an antenna up to the test tower and down again a few days later was nearly $ 300. In addition, it was necessary to order the mobile cranes far in advance, often resulting in expensive waiting time. An attempt was also made with an aerial cable arrangement running to the tops of the towers. But that solution necessitated lifting the antenna from the cable to the mounting base by hand, which proved to be both difficult and time wasting and in many cases hazardous.

Also on the ground

The Andrew Corporation also has a truck-mounted Hiab loader for handling and transporting the delicate products within the plant area. The antennas handled using the Hiab Method vary in size from more than 3 feet in diameter to nearly 13 feet and weigh up to 1320 pounds. ■

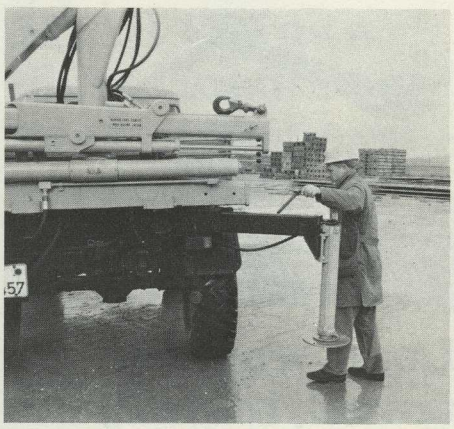
Attention getting rig

At the IAA Exposition in Frankfurt last autumn Hiab was well represented, partly by its own display in the outdoor area, and partly by the mounting on a Unimog chassis which caught the eye of one of the dominant exhibitors—Mercedes Benz.

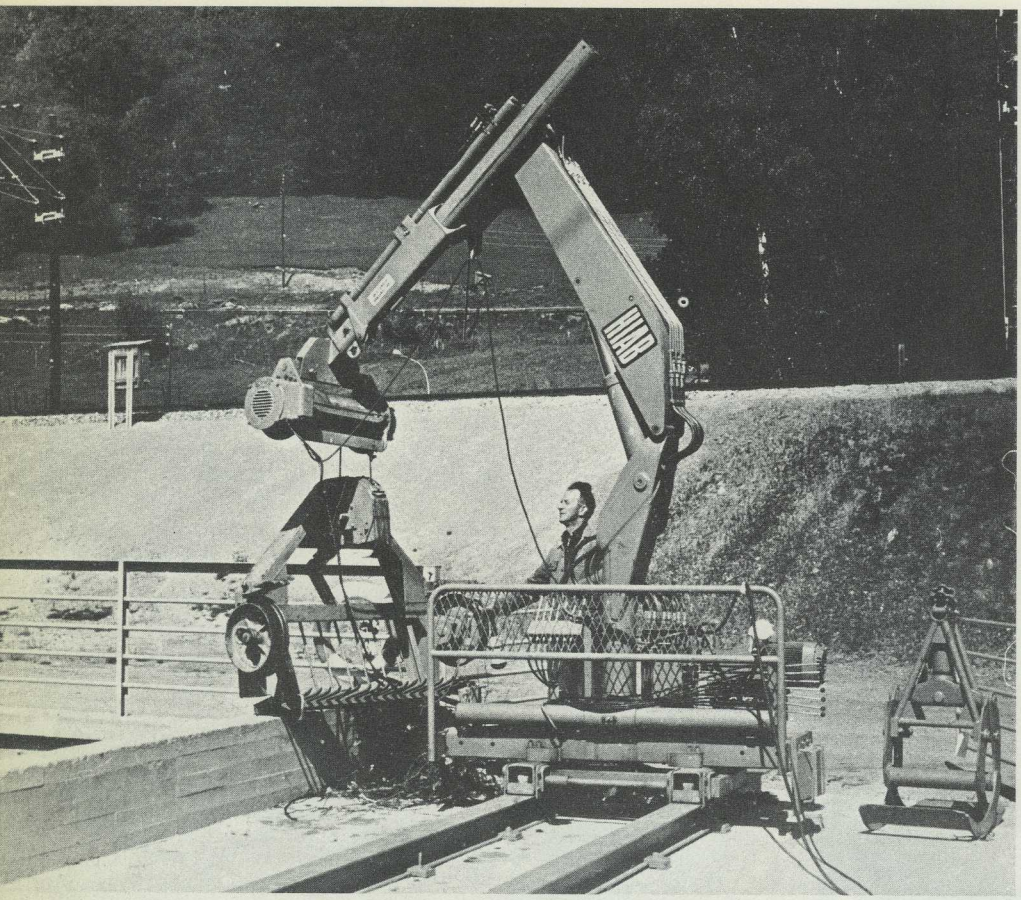
A similar rig was recently tested by the German motor publication *Das Nutzfahrzeug*. The rig consisted of a Unimog U 100 with rear-mounted HIAB 550, four outrigger legs and a pallet fork. The equipment was used to unload a double-axle bogie trailer loaded with palleted concrete block, each pallet weighing 1 ton. The driver and a helper unloaded the 12 pallet load in 32 minutes. Here is how the time was accounted for in the periodical:

Work phase	**Time: min**
Unhitching the trailer and placing the tractor in unloading position	1.5
Applying the outrigger legs, bringing the loader to working position and attaching the pallet fork	5.0
Unloading 12 pallets at 1 ton each	22.5
Detaching pallet fork, bringing the loader to parked position, withdrawing the outrigger legs and hitching up the trailer	3.0
Total time on the building site	32.0

It may be added that Hiab has now further developed this pallet fork so that it can be hydraulically maneuvered into position under the loaded pallet. With this new pallet fork and rotator the driver could have managed the whole job alone and in even less time. *Das Nutzfahrzeug* also points out that the placement of the loader in this case was not the most appropriate for the purpose intended. If the loader is placed on the trailer it isn't necessary to unhitch from the pulling vehicle before unloading, and the loader will still reach over the trailer and the load bed of the pulling vehicle as well. Less space is necessary at the unloading point besides. With such an arrangement the unloading time for 12 pallets could be cut to 25 to 26 minutes, according to the article. ■



Lift with method



A Roll-Loader clears power station intakes

At a power station in Norway a HIAB 174, mounted as a roll-loader, is used to clear the catch screens in front of the turbine intake ducts. The loader has a winch far out on the boom which drags a kind of rake up the face of the almost perpendicular catch screens, taking with it branches, seawed and other objects trapped by the screens. Thanks to the roll-loader mounting, the loader can move along the dam and clear all of the intakes. Both the loader hydraulic pump and the winch are electrically powered. ■

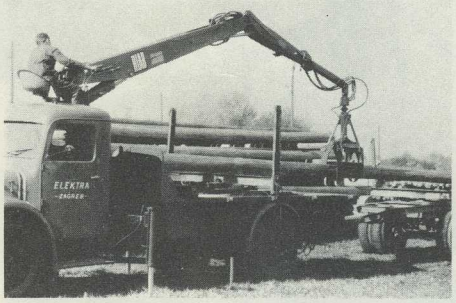
Tank replacements in half the time

Many industries require large quantities of genuinely pure water for their activity. Purotron is the name of a company in California which has taken meeting this need as its special task. Purotron supplies a type of filter tank in which incoming water is passed through plastic foam to separate out mineral salts and other harmful impurities. These so-called "Jumbo" tanks can purify about 7920 gallons of water a day, but must be exchanged regularly for new ones with fresh filters.

For this purpose Purotron has a number of service trucks driving about and changing an average of 10 tanks a day each. Loading and unloading when replacing the tanks created a problem, as the tanks are both heavy and difficult to handle. Usually it was necessary to bring in a fork truck and at least two men.

Purotron turned to Hiab's representative in California, Stanco Manufacturing & Sales Inc. with the problem. There the suggestion was made to mount a HIAB 293 or HIAB 245 behind the cabs of all the service trucks.

—Now the driver can manage the tank replacement alone and in half the time it took before for a fork truck and two men, says Purotron's VP Dave McAuley. We know now that the Hiab Method is saving us time and money every time one of the service trucks drives out of our plant. ■



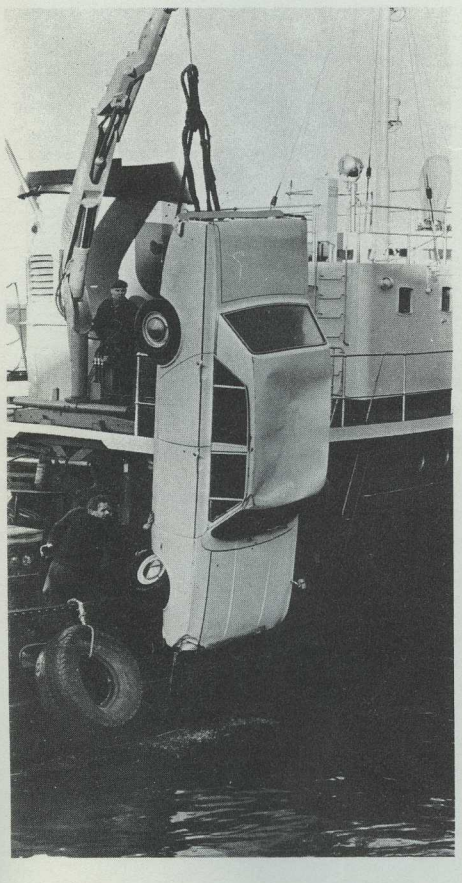
Load, unload, travel, install, repair

If you were to say that the Electric Works in Zagreb, Yugoslavia, has myriad uses for its Hiab loaders, you wouldn't be guilty of any exaggeration. They not only load and unload poles, transformers and other material from their trucks, but are also used to raise the poles and to help out when the transformers are being installed. When the time comes for service on the lines or street lighting, a Hiab loader lifts the service man up in a man-basket. Double outrigger legs provide the short chassis stability for very heavy lifts. ■

Scientific farming with the Hiab-method

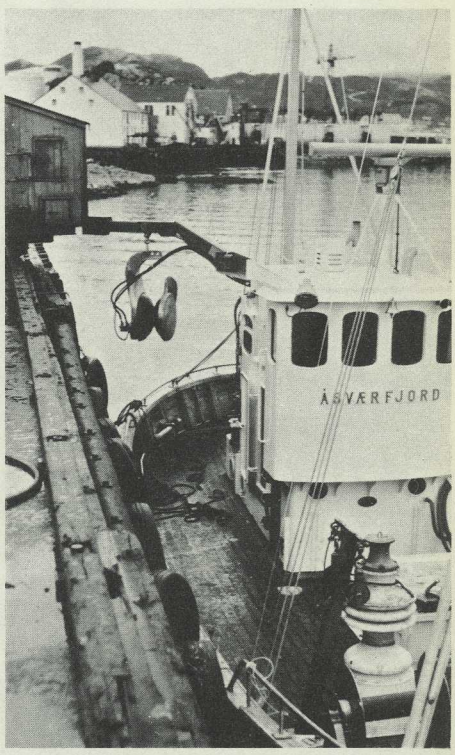
Farming in Australia is highly rationalized in many respects, and in the vicinity of Brisbane G. and J. Gilmour undertake contracts for the spreading of artificial fertilizer. A spreader unit mounted on an International chassis and holding 6 tons of fertilizer is used. To this vehicle is also attached a trailer loaded with additional fertilizer. The fertilizer was originally loaded on the spreader vehicle either by hand with shovels or using a front-end loader. Both methods had their disadvantages. Loading by hand required several men, most often three, and was very slow in any case. The front-end loader was of course, more efficient and faster, but entailed the high cost of keeping an extra machine available at the working location.

The Gilmours' problem was solved by the Hiab Method. A HIAB 174 was mounted behind the cab on the spreader truck and was provided with a rotator and clamshell bucket. After that, the operator could manage the entire job on his own. Thanks to the platform on the loader body, the operator has a good view of the whole vehicle and can load either from the trailer or from ground stocks. Six tons of fertilizer are loaded in 10–12 minutes on the average with no extra personnel, no waiting time, and no expensive equipment standing idle.



HIAB 174 as a ship's loader saves space and money

When the harbor authority in Vasa, Finland, recently obtained its own vessel to be used as a tug, harbor ice-breaker, service ship etc., the traditional boom winche was discarded and a HIAB 174 mounted instead. Besides realizing savings in money and space on board, considerably more versatile and easily operated crane equipment was also obtained. The loader is used among other things, for placing and recovering buoys and sea markers and their anchors, as well as for lifting welding and diving equipment, oil drums, gas cylinders, and the like, which are required for the ship's many widely varying tasks. One of the first jobs for the new vessel, which was given the name "Vasa" of course, was to salvage a car which had rolled off one of the piers in the harbor. The salvaging operation offered no difficulties with the Hiab loader on board.



Greetings from M/S Åsværfjord. Owner: John Petterssen. Use: Whitefishing with drag nets. Cod fishing with line and net. Salmon fishing in the Sea of Norway.

During the period 14–16 April, Hiab service managers from twelve countries met for a conference. Some of the points on the agenda:

A survey of present technical difficulties and their solutions.

General survey of today's service support. Its aims and means.

Participants:

Europe

Austria:	Mr. Prainer
Belgium:	Mr. F. Penninckx Mr. A. Kiekens
France:	Mr. D. Thenin
England:	Mr. R.W. Coleman Mr. W.A. Pudney
Holland:	Mr. Hoexum Mr. Smit
Italy:	Mr. P. Malacarne Mr. M. Rocca
Switzerland:	Mr. Wettstein
Portugal:	Mr. H. Alves
West Germany:	Mr. H. Meyer

North America

Canada:	Mr. S. Grønroos

Asia

Hong Kong:	Mr. R.G. Wood