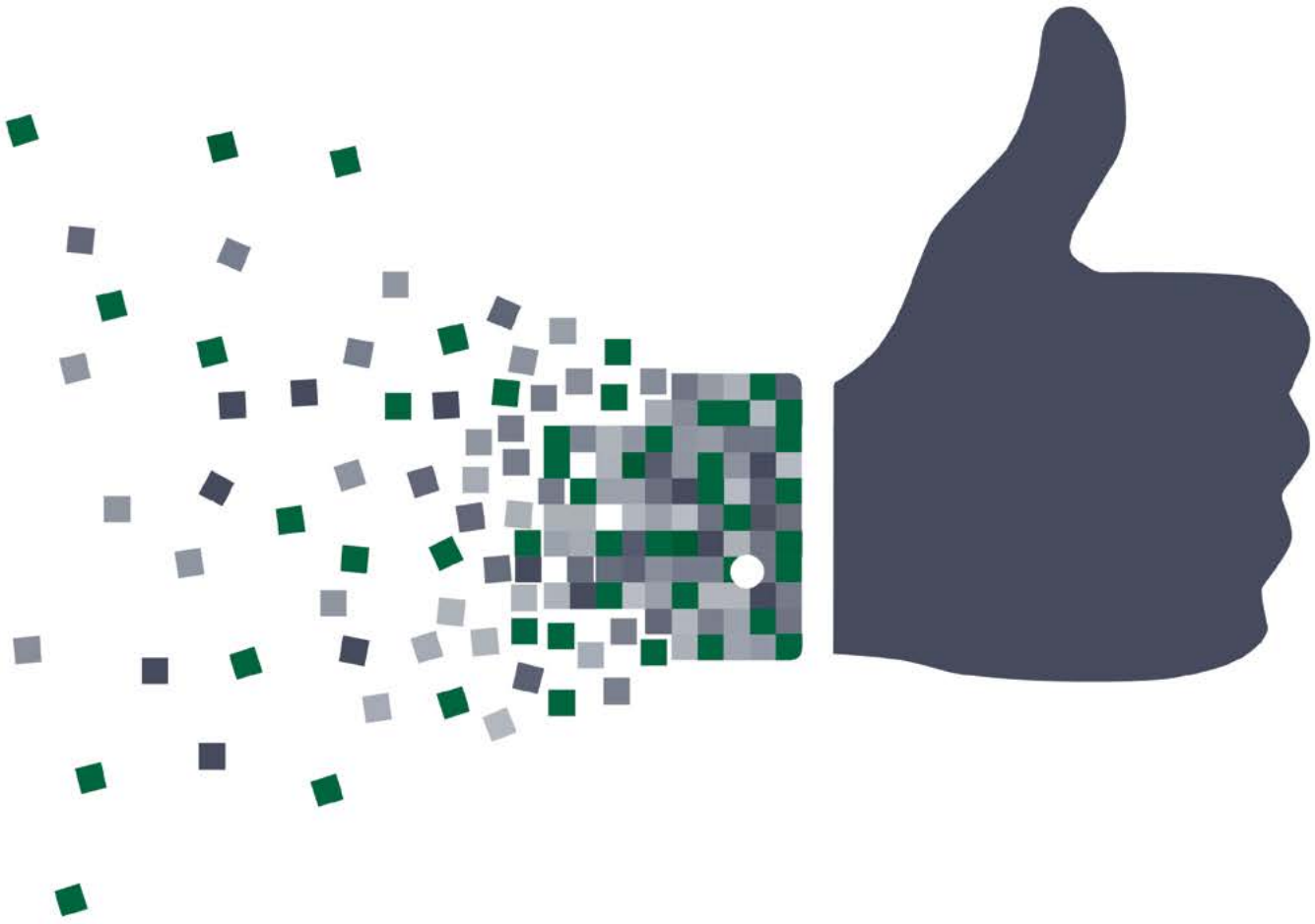
POWER OF COOPERATION



2019

Hekotek

IMPORTANT STEPS TO MATURITY

WHEN A CHILD IS BORN, JUST THE SKY IS THE LIMIT, BUT WHAT BECOMES OF HIM DEPENDS ON MANY FACTORS. THE KEY ROLES IN HIS PERSONALITY DEVELOPMENT ARE THOSE OF PARENTS, FAMILY AND FRIENDS, SCHOOL, TEACHERS AND SOCIETY.

Any child takes over both personality traits and behavior templates from his parents. Family and friends support him, helping to gain confidence. School and teachers encourage and motivate to develop, grow up and keep going towards independence, while the society is an area where a person is learning all his life – to communicate, to grow personally and professionally, to understand others and defend own notions. Life in society implies a nonstop interrelation of each and every one.

In practice establishment and development of a company follows similar laws, and parallels can be interesting to discover.

A company parent is its founder, who is responsible for the first steps and achievements of the newly born market player. One cannot choose a parent, but we at Hekotek feel blessed. Our founder Heikki Koivunen had had over 20 years of experience within sawmill equipment field by the day he founded Hekotek. A gifted engineer and entrepreneur, he set the right development guidelines for the company, as well as the core values: work for the good of customers, rationality of technological solutions and responsibility for the results achieved.

Our friends and family are our partners and the whole team of Hekotek. It is easy to work when you feel trust and support. We all follow the same way, have common understanding of goals and value the contribution of each of us to the overall result.

Motivating teachers of Hekotek are our owners. We are grateful to Lifco group for the possibility to take our own decisions and act independently, for their result oriented approach, which implies no daily inspection of our working process and endless reports...

And finally, our society is our customers and competitors – a market bringing new challenges every day. No secret, customers are different: easy or hard to deal with, confident or uncertain, demanding or fault finders... Every customer is special. Projects of confident and demanding customers almost never happen to be too easy. However, experience shows that they are usually the most successful ones, for the benefit of both parties.

ONE CANNOT UNDERESTIMATE THE ROLE OF COMPETITORS IN THE PROCESS OF OUR DEVELOPMENT. THEY ENCOURAGE US TO CONTINUOUSLY DEVELOP AND MOVE AHEAD – ON AND ON, FURTHER AND FASTER, DAY AFTER DAY.

VEIWPOINT

Heiki Einpaul
Managing director
AS Hekotek

The period of our maturing is over. By now Hekotek has grown into the largest Baltic manufacturer of equipment for sawmill and bioenergy sectors, and this is a merit of each of us. We are a mature team of professionals, who know their business, surmount difficulties and are responsible for the ultimate outcome. Ahead are new achievements – new markets, new customers, new projects and, apparently, new challenges to meet.

A CHALLENGE OF HIGHER SPEED

CLEAR UNDERSTANDING OF ULTIMATE GOALS, REASONABLE DEMANDS, WELL-CONSIDERED DECISIONS – THESE FEATURES CHARACTERISE A DISCERNING CUSTOMER. SUCH CUSTOMERS ARE NOT ALWAYS TOO EASY TO WORK WITH, BUT DEFINITELY THE MOST MOTIVATING FOR US AS AN EQUIPMENT PRODUCER.

VIEWPOINT

Andres Koha
Chief design engineer
AS Hekotek

The old combi-line is now operating as a green sorting facility. Under the designed speed of 90 pcs./min it shows a very good operating result – about 50 pcs./min. Similar result is not a rare case even for lines of much higher designed capacity (some 150 pcs./min). Therefore, one should not mix the two notions – speed and operating result. The bare designed speed is not a guarantee of the line full production load. The latter depends not only on the equipment installed, but on the general organizational management of the sawmill and debottle-necking of the certain parts of its workflow.

Such kind of cooperation has been going on between Hekotek and Viiratsi Saeveski sawmill in Estonia for over 20 years. Starting from the delivery of a manual sorting line for sawn timber in 1996, we went through several stages of this sawmill facilities modernization. Today in cooperation with this particular customer we have taken our major step forward – towards new speed level of sawn timber handling. The speeds of the new dry boards sorting line range between 160 pcs./min – on the upper floor of the line and over 200 pcs./min – on the lower floor.

The cornerstone in achieving such speeds is full automation of the line, implying a minimum of human intervention in the working process. In real life, the designed speed of the line and actual number of board handled per minute are different things, the latter often leaves much to be desired. It means that purchase of a high speed board sorting line makes sense only in case of taking full advantage of its capacity and features. In its turn, it can only be possible if bottlenecks inducing the line idle time are removed.

With that in mind we are concerned with debottlenecking already at the stage of engineering design. As the line consists of several units, we calculated in advance the speed correlations of each of them to be used for all the main sawing patterns. Set as default, they help to prevent board jams and damage. When operating the line is a test mode, our technical specialists carefully controlled and adjusted each of the parameters set.

If necessary, the line operator can add optional parameters to the default settings. Switching between the settings is easy, user-friendly and intuitive, due to advanced automation system.

As requested by the customer, beside the new speed level, we ensured a possibility of the new line to be used for sorting and stacking of non-dried boards – to be transported to woodworking enterprises of the same owner for deeper processing. Some units and structural elements of the line were designed with this operation feature in mind.

A NUMBER OF SENSORS NECESSARY FOR PRECISE OPERATION OF THE LINE IS 3 TIMES MORE COMPARED TO WHAT WE USED FOR OUR STANDARD NORMAL-SPEED SOLUTIONS.

New vs. old. The new high-speed board sorting line have increased the sawmill capacity from 130 th. up to 200 th. m^3 of sawn timber produced annually.

The line is additionally equipped with a unit ensuring free length of sawn timber, which is actually a must have for competitive European market players today.

Launched at Viiratsi Saeveski in April 2019, the new equipment is expected to reach its designed capacity within the nearest months. The project will, thus, be completed. However, we at Hekotek hope that our happy, but still very demanding customer is not going to stop motivating us – for even more challenging achievements.

VIEWPOINT

Margo Muzakko
Head of project department
AS Hekotek

For many years we kept up about the same middle speed level of our board sorting lines – 100–120 pcs./minute. Higher speed solutions were simply not required for our previously realized projects. Our philosophy is simple – the solution we offer to a customer should always be reasonable. In other words, it makes no sense to offer a spaceship for the projects, where an airplane is enough.

For the project in Viiratsi we undertook a commitment to reach the max. speed of over 200 pcs. per minute. It was a real challenge, but we took every effort to succeed and we got it done. Like every single project, the one of Viiratsi Saeveski brought us new competence and experience, which we are happy to offer to our customers in future.

MORE SAWMILLS FOR SIBERIA

CURRENT ECONOMIC SITUATION IN RUSSIA LEAVES MUCH TO BE DESIRED. HOWEVER, SINCE SAWN TIMBER HAS ALWAYS REMAINED IN THE LIST OF EXPORT GOODS, INVESTMENT IN SAWMILL FACILITIES OF DIFFERENT SCALE HAS PERMANENTLY BEEN ESSENTIAL FOR WOODWORKING-FOCUSED REGIONS OF THE COUNTRY.

Today the apparent Russian leader in the field of new sawmill facilities construction is the region of Irkutsk in Eastern Siberia. And namely to this region Hekotek almost simultaneously supplies equipment for three sawmill projects during 2018–2019.

NEW PROJECTS – OLD CUSTOMERS

In autumn 2018 we launched a new sawmill production on site of RusForest Magistralny LLC. By the end of the year the sawmill successfully reached the designed capacity.

The new sawmill is by far not the largest in the region – its capacity being up to 125 thousand m³ of sawn timber. However, by no means it stands for any less serious approach from our side. Moreover, in this project Hekotek took responsibility of the general supplier, which implies ensuring smooth operation of the plant complex equipment.

The scope of Hekotek own produced equipment for the project includes log infeed systems, sawmill waste handling conveyors, as well as timber sorting line equipped with 20 sorting bins. The 'combi' sorting line, intended for handling both green and dried boards, is the most reasonable alternative to mid-scale sawmills.

Start-up of other equipment set by Hekotek – a 50 bin sorting line for dry timber – is planned for august 2019 at the sawmill of Lesresurs LLC in the village of Novaya Igirma, just 373 km westwards from the above-mentioned project site.

A FACTOR OF REPUTATION

For new customers a choice of equipment suppliers is to a great extent a question of trust, which in its turn is based on the supplier's reputation and experience in the certain region.

This was exactly the case why Hekotek was chosen as log sorting equipment supplier for the project of DeKom in Bratsk. The sorting conveyor equipped with 40 bins is to be launched in autumn 2019. The equipment is designed for handling both standard, and large heavy larch logs (of max. butt-end diameter 750 mm).

The line designed capacity makes up some 500 th. m³ of logs per year, which is to increase the potential capacity of the sawmill as much as by 80%. This is to say not only about serious plans of the certain customer, but about favorable market conditions forecasted.

COMPETITIVE NEIGHBOUR

The neighboring region of Krasnoyarsk is staying abreast. Here in the village of Chemdalsk in progress is another sawmill project with Hekotek participation – a sawmill of 165 th. m³ sawn timber designed capacity.

We are to supply a set of equipment as follows: log sorting line – the longest one in Hekotek history (60 bins), log infeed conveyor to sawline, as well as by-products handling conveyor complex. We are to deliver the equipment as far as to Ust-Ilimsk (closest town), while the further delivery to the site of the future sawmill is the customer's responsibility.

This project does not imply complex delivery from our side: the customer independently purchased equipment by different suppliers. Even so, all the sections of the sawmill should operate as a single unit, since a failure of one section can significantly reduce the overall performance and efficiency. To avoid that, we have to consider all potential bottle-necks in the production chain, even if the framework of the current delivery is limited to separate lines. And this should be done even before any engineering design – at the stage of preliminary planning and choosing the technological solutions to be used.

In this project, our daughter company Sorb LLC (located in St. Petersburg), normally taking care of our equipment deliveries in Russia, arranges logistics also for Söderhamn Eriksson sawline.

VEIWPOINT

Heiki Einpaul
Managing director
AS Hekotek

It is revealing that in the projects of RusForest Magistralny and Lesresurs we deal with our old customers. In 2014–2015 we successfully delivered and launched complex equipment of pellet plants for both of them. The mere fact of old customers returning with new project ideas means that we managed to fully justify their confidence. This is a case where each of these customers is not only happy with the completed projects outcome, but have no doubt about the results of the future cooperation with us. And we, from our part, take every effort not to fail, and help them achieve new goals.

THE FURTHER AWAY

ONE CAN FIND IT UNBELIEVABLE THAT A SAWMILL PROJECT CAN EVER BE REALIZED IN SUCH A PLACE AS CHEMDALSK. THE NAME OF THE PLACE SPEAKS FOR ITSELF, MEANING 'THE FURTHER AWAY' IN THE RUSSIAN LANGUAGE. IT IS A SMALL SETTLEMENT BURIED IN THE HEART OF THE FOREST, WITH SOME 45 INHABITANTS.

Every winter for several weeks the temperature here keeps at the level of -50°C and even lower. Currently there are no roads to connect this place to the civilization, except for one 300 km long timber haulage road. The only other access to Chemdalsk could be by the river, but it is actually not navigable. A railway is planned to be constructed, however, since construction works of such a scale take long, it is absolutely out of the question that it cannot be the issue of the nearest future. The only thing actually superabound in this area is raw material for the future sawmill – forests are plenty here, just a short stroll away.

Interesting is the fact that the place is not connected to the general electricity network and all the works on the project here are to be implemented with the electricity locally produced by generators. With respect to that, building of the local CHP is of top priority for the customer to be able to burn all sawmill waste for energy generating. It is, however, a great challenge to balance consumption and production peak loads in the local electricity network.

Likewise, challenging is the whole project for all of its participants. Nevertheless, we hope that in the next issue of Power of Cooperation in 2021 we will have plenty to tell about its progress and the results.

NEW LEVEL OF DELIVERY

THE PROCESS OF EQUIPMENT PURCHASING IS USUALLY LONG – THE CUSTOMER IS TO CHOOSE BOTH THE SUPPLIER AND THE OPTIMUM TECHNOLOGICAL SOLUTION, AS WELL AS RAISE A LOAN, AT LEAST IN MOST OF THE CASES.

Buying imported equipment in Russia is not the simplest thing, since here the things-to-do list is even longer, including necessity of passing at least several formal procedures, which by no means fasten the process. Neither customer himself, nor the equipment supplier in this case is happy with pointless waiting. In one of our recent projects we succeeded to offer a solution how to quickly (in fact within the shortest time possible) launch the process of the future plant equipment manufacture.

A complex delivery of pellet plant equipment for Lesosibirsky LDK No. 1 (Krasnoyarsk region, Eastern Siberia) was signed between the customer and our daughter company Sorb LLC, the latter being responsible for delivery of Hekotek complex equipment under a full-scale manufacturer's warranty, as well as for commissioning supervision.

Construction works onsite started in July 2018, and the plant was launched by winter 2018 – just in time for the pellets to be exported to consumers for the new heating season.

The initial designed capacity of the plant makes up some 70 th. ton annually – two pelletizing lines should be enough to process by-products currently available at the sawmill. A possibility of further capacity increase – up to 100 th./year – is already provided in the project, which has become a signature of Hekotek by now.

Beside traditional packaging into Big-Bag containers, alternative packaging solution was provided – a unit of automated loading of sea containers (20 ft) on flatcars. This solution has already been used in some of our previous projects realized in Siberia, which is not without a reason: railway is the only possible way of pellet transportation from this area.

THIS IS NOT THE FIRST PROJECT OF HEKOTEK AT LESOSIBIRSKY LDK NO. 1 – WE STARTED IN 2011 WITH A LOG SORTING LINE DELIVERY, AND CONTINUED IN 2013 AS A GENERAL SUPPLIER OF A NEW COMPLEX SAWMILL.

VIEWPOINT

Olga Sizemova
Managing director
Sorb LLC, Russia

The new format of delivery is an undeniable advantage for the customer, since the import business as such was turned into the form of intra-country delivery. Crucial for the customer was the time frame of the new plant launch.

To ensure that, the contract was to be signed within the shortest time, so that the equipment production would be started immediately. And we succeeded. The contract was agreed and signed within two working days, and a week later manufacturing works were started in Hekotek – a record-breaking result!

CALLING FOR SPECIAL ATTENTION

IN 2013 OUR PARTNER CPM EUROPE INTRODUCED AN INNOVATIVE SYSTEM OF PELLET PRESS ROLLER LUBRICATION. THE OIL LUBRICATED ROLLER (OLR) SYSTEM PROVIDES A NUMBER OF ADVANTAGES, AS COMPARED TO THE PREVIOUSLY USED GREASE LUBRICATION.

It increases the lifetime of roller bearings and reduces operating costs of a pellet plant. The new system is much more eco-friendly, with no continuous lubricant consumption required. Before, some 200 liters of grease per month were needed for one press operation. From technical point of view, the roller bearing, which used to be an expensive consumable, has now turned into a spare part of long-lasting performance. Today there is no need to change the whole roller, as its inner assembly remains functional. One only has to change the roller shell, which is a wear part that needs to be regularly changed – in fact, 2–3 times more often than a die.

In financial terms, to replace the roller shell is much less expensive comparing to the whole roller replacement. However, the work itself requires both skills and competence. Even a qualified mechanic can easily break the unit without a special training. With respect to that our customers appreciate the service of rollers reconditioning at our premises in Hekotek. Here we have all the requested conditions, including trained staff, proper machinery and a dust-free room. We perform this work fast, at a reasonable price, taking full responsibility for the quality and the final result.

Unfortunately, this service is not available for our customers outside the EU, for example, for pellet producers of Russia. With that in mind, when training the local staff of pellet plants, our technical specialists place an extra focus on the issues of the rollers reconditioning – to ensure that the local mechanics would manage on-site, with no damage to expensive equipment units.

OLR is a closed system, completely eliminating any contact of oil with the pressed raw material, which is undoubtedly good for the pellets quality.

SOUTH-EAST ASIA: FIRST STEPS

RECENTLY THERE HAVE BEEN LOTS OF DISCUSSIONS OF THE ASIAN MARKET OF WOOD PELLETS PERSPECTIVES. THE FACTS COMMENT THEMSELVES: JAPANESE INVESTORS ARE PLANNING DEVELOPMENT OF PELLET PRODUCTION IN SUCH COUNTRIES AS VIETNAM, INDONESIA, MALAYSIA, ETC. AIMED AT FUTURE PELLETS TO BE SHIPPED TO JAPAN.

In June 2018 Hekotek signed its first contract for complex pellet plant delivery to Vietnam, for Biomass Fuel Vietnam Co., Ltd., belonging to the Japanese owners.

BY YEAR 2024 JAPAN PLANS TO INCREASE CONSUMPTION OF WOOD PELLETS BY 9 MLN TON, WHICH IS ABOUT 20 % OF THE OVERALL WORLD CONSUMPTION EXISTING TODAY.

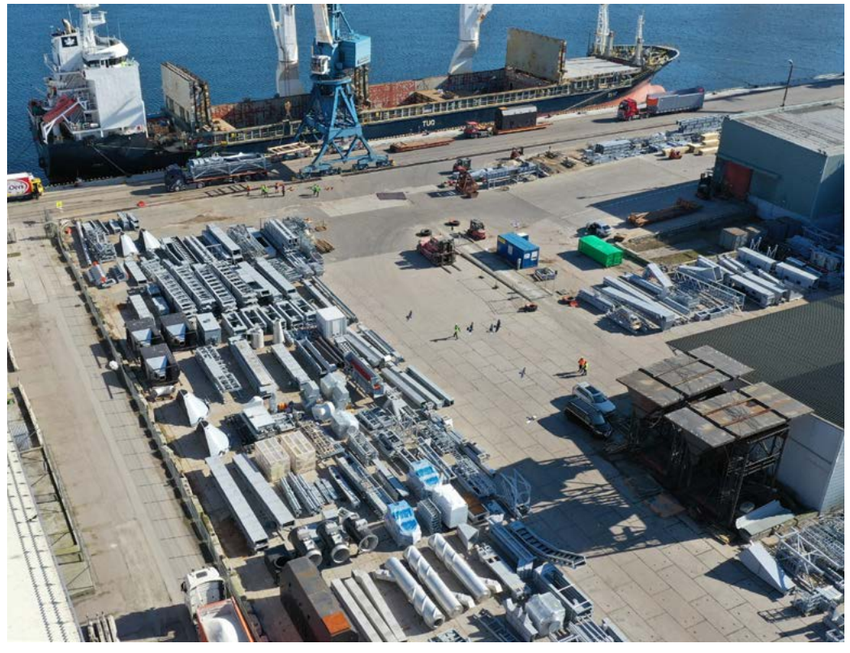
The wood pellets are to be produced from acacia and eucalyptus grown in the local plantations. For us this is new raw material for pellets. However, our partner CPM Europe – a leading producer of hammer mills and presses for pelletizing – is already an experienced supplier to the region of South-East Asia, and its practice shows that acacia and eucalyptus sawdust is pressed trouble-free under just a slight adjustment of the technological process.

The new pellet plant to be launched in November 2019 is the largest in Hekotek experience so far, its designed annual capacity reaching 160 th. ton of pellets. The whole of this volume is to be shipped by sea. With respect to that, we have designed the storage facilities for the plant – 5 large silos, 4 th. ton each. Under the provided dispatch speed of 250 ton of pellets per hour, a 12 th. ton vessel can be loaded within 48 hours.

Upon successful realization of this first project, the customer is intended to build more plants – to produce totally up to 1 mln ton of pellets. It indicates the real perspectives of the Asian market regarding pellets consumption and the corresponding demand forecasted.

These are, however, strategic plans. In reality much will depend on the result of the first project, that is why we do our best to foresee all possible nuances, related to raw material, climate conditions, mentality of the country, etc.

For us at Hekotek very important is he customer's reasonable approach to the project. Instead of planning several plants construction at a time, his intention is to move ahead step-by-step. From our side, we take all measures to ensure perfect project implementation and – as a result – trouble-free operation of the future plant.



VIEWPOINT

Alari Roosi
Project manager
AS Hekotek

The project in Vietnam is the southernmost project of Hekotek, all our previous deliveries were within Northern Europe and Russia – the areas of severe climate, especially in winter time. The climate in Vietnam is absolutely different, that is why in the Vietnamese project we have even been overcautious concerning some of the issues. For example, this delivery includes more cooling units than any of our previous ones – to ensure proper pellets cooldown in the hot climate. We make no secret of the fact that it was probably an overdesign, but this is the only way for us to gain necessary experience in the region, which later will be used for the benefit of the customer's future projects there.

Similar is the situation with raw material drying. We supply 3 drum dryers for 6 pellet presses, which should be enough for smooth operation under the climate conditions of this area. At the same time, we have reserved a place for an extra drum dryer in the layout – to be able to add it if the need arises, since the real moisture content of raw material actually available for processing can only be evaluated when the plant starts operation.

A lot of other factors should also be considered to arrange safe and smooth production process. We clearly understand that no indulgence is admitted and are ready to work much and hard to achieve the best result.

VIEWPOINT

Eisuke Nomura
Biomass Fuel Co., Ltd.

The reason why we made the choice in favor of Hekotek is very clear – Hekotek does not supply separate units, but a complex equipment of the plant, taking responsibility of its launch and adjustment for smooth operation. We have visited several pellet plants built by Hekotek in the Baltics. They successfully operate and demonstrate how simple pellet production can be under the properly arranged process.

SMART APPROACH

A set of technological units of the plant is to a great extent determined by raw material. The new plant is to process round logs mainly, which requires debarking. In fact, the debarking unit effects more in logs clearing out than in their proper debarking, needed not so much for the sake of pellets quality, but for protection and service life extension of equipment cutting tools.

Our experience shows that debarking of round logs ensures twice less frequent need of wear parts change than is necessary for processing of non-debarked logs. As for the dies – the most expensive wear parts in pellet production process – their service life can be prolonged as much as 3 times under application of log debarking.

PELLETS OF NORDIC TEMPER

ALTHOUGH FORESTS ARE NOT EXTENSIVE IN NORWAY, SAWMILL INDUSTRY IS DEVELOPED HERE, WHICH INHERENTLY IMPLIES A CERTAIN AMOUNT OF RESIDUALS TO BE UTILIZED UNDER ENVIRONMENTALLY AND ECONOMICALLY RESPONSIBLE APPROACH. FOR THAT PELLET PRODUCTION IS THE MOST EFFECTIVE OF THE EXISTING SOLUTIONS, ESPECIALLY NOW, WHEN THE EUROPEAN MARKET OF PELLETS HAS RECOVERED AFTER A SIGNIFICANT DECLINE OF 2014–2017.

In autumn 2019 Hekotek is to launch a new pellet plant onsite of Sokno sawmill of Moelven group – one of the largest Scandinavian groups engaged in timber processing. This is their first pellet plant in Norway, but very likely not the last one – taking account of the general market situation and the customer's approach to the current project.

The plant complex equipment is based on the advanced solutions already proven by the time and experience, however, like all our projects, this one has certain special features.

About 80 % of the future raw material is to be supplied from the local sawmill, as well as from other sawmills of Moelven. A part of the equipment complex is a conveyor delivering shavings from the local planing mill directly to the pellet production. With a rechipper added to the main equipment low quality chips can be used as raw material for future pellets.

Interesting is the part of the project related to the customer's expectations on black pellets development trend. As requested, in the general layout of the plant we provided a possibility of adding a reactor for sawdust torrefication.

80 th. ton of pellets – the initial capacity of the plant with 3 pellet presses by CPM – can in future be increased by means of the fourth press installation. Such a possibility considered in advance ensures the future investment to be especially cost-effective.

Norway is a new market for us and we certainly have met some challenges in the course of the project and still have some of them ahead, since Norway is not a member of the European Union, with all the corresponding customs-related procedures, paperwork, and many other issues. However, we are used to operate in different markets, and take it all just as new experience – gradually moving forward, taking one thing at a time. We have no doubt that this experience will work to the benefit of Hekotek team and our future.

Equipment of the future pellet plant - ready for dispatch

VIEWPOINT

Urmas Uudemets
Project manager
AS Hekotek

Norway is a rich and expensive country, which correspondingly influenced the customer's requirements to the project: the equipment should be as effective as possible to bring regular exploitation costs down to a minimum. In its turn, it determined the choice of some technological solutions.

One of such solutions is underground 4.5 meters deep storage for sawdust. This storage facility equipped with 'moving floor' scraper conveyors transporting sawdust to pellet production process is to be used at night time to save expenses for loader driver salaries. Another case in point is a belt dryer by Stela with an advanced heat recovery system chosen for sawdust drying. The solution more expensive in terms of initial investment can in the long run reduce the volume of heat power consumption for drying by some 30 %. This choice also indicates the level of environmental responsibility of the country and the certain customer.

SHUT OUT THE MISTAKES

CONSIDERING CONSTRUCTION OF A NEW PELLET PLANT JUST A FEW CUSTOMERS KNOW FOR A FACT WHAT KIND OF MANUFACTURING FACILITY THEY WANT TO GET IN THE END. QUITE OFTEN HAPPENS AS THUS: A POTENTIAL CUSTOMER HAS HEARD A SUCCESS STORY OR SEEN A WELL-OPERATING PLANT AND, AS A RESULT, WANTS SOMETHING SIMILAR. HOWEVER, WHAT HE WANTS IN FACT HAS NOTHING TO DO WITH THE SIMILARITY OF HIS FUTURE PLANT WITH SOMEONE ELSE'S. ESSENTIAL IS THAT THE FUTURE PLANT IS EFFECTIVE UNDER SPECIFIC CONDITIONS OF THIS PARTICULAR CUSTOMER.

And these conditions can vary significantly even for neighboring enterprises. Therefore, taking into account the experience of others, it is important not to copy other existing plants, especially at the risk of copying others' mistakes.

HARMFUL EXTREMES

One should not underestimate own capabilities, running to extremes like 'we need a small plant since raw material volume is limited and never expected to get increased'. Reality has proven such an approach being a mistake.

At the initial stage of a new plant engineering we always suggest our customers to foresee a future possibility of increasing the plant capacity. It ensures future production expansion at minimum time and money expense. Experience shows that at long last over 90 % of our customers reach a decision of expanding their production facilities. Among them are also those who previously refused to consider such a possibility. Unfortunately, for these customers the project of expanding production gets much more expensive than for those who followed our recommendations.

CLIMATE AS A FACTOR

A mistake is also to disregard the climatic conditions of the future plant operation area. For instance, in severe climate even if choosing a belt dryer for a small pellet production facility, one cannot totally rely on) a low-capacity dryer because of significant increase of heat losses percentage in hard winters, at -30°C.

On the contrary, if your normal winter temperature is just slightly below zero, the wrong choice is a hammer mill for green chips. Chips initially having a minus temperature slightly melt down inside the mill influenced by the warm air, and quickly refreeze on exit from the mill, plugging its outlets. A more suitable solution, which we offer, is a re-chipper – its operation concept allows for the avoidance of the problem described.

PROPER MANUFACTURE

While on the subject of hammer mills, it is important to note its operation nuances in the 'dry part' of pellet plant. Today many buyers of industrial pellets, in pursuit of saving the own costs, ask for very small fraction pellets. Smaller fraction requires smaller cell size for hammer mill screen. A fine screen in its turn takes effect on the mill overall performance, getting it significantly down. With respect to that we recommend to select a hammer mill with a certain excess power to ensure proper performance even for small fraction pellets production.

Unfortunately, these are by no means all the aspects worth close attention already at the stage of future facility planning. And luckily, having chosen a responsible supplier of the equipment, the customer never has to face those problems alone and unsupported.

The cornerstone of success is, however, teamwork. It implies an ability of equipment supplier and customer to solve the tasks together, which in its turn is impossible without trust, understanding and interoperability between all the project participants.

Typical mistakes related to equipment choice can be found in every field. These should be avoided in principle.

THE MORE, THE BETTER?

It is sometimes believed that one big three-way drum dryer is a more reasonable solution than several smaller ones. Customer's logic is simple: one drum operation is easier to regulate, as compared to three drums (which in fact is a controversial point, as the operator is only responsible for controlling the process of the drum automated adjustment). In addition, spare parts and consumables are only needed for one drum. That is actually all about the advantages of this solution.

As for its drawbacks, they worth to be considered in detail, starting with the fact that installation of one big drum dryer takes significantly more time than is needed for e. g. three standard drums. Several-drum solution also ensures our customers' flexibility, which actually is its main advantage. The plant keeps operating, though not in full, during normal maintenance shut-down of one line, while the plant with one large drum stands idle. Similar is the case of raw material temporary shortage.

One or even two lines equipped with a small drum each can easily be turned off for a while. Same situation is, however, not so easy for big drums, as it is very difficult to keep the set parameters and working stability when operating in a reduced-power mode. Work at low temperatures is fraught with significant fluctuations, drying quality fall-off and equipment deterioration.

VIEWPOINT

Alari Roosi
Project manager
AS Hekotek

Hekotek's responsibility in the project is never limited to the equipment supply. A significant part of our work is about helping our customers to achieve their production goals in the most rational way, and the right choice of equipment is a cornerstone of that. Should a customer make a mistake, we are ready to explain in detail where he is wrong, offering solutions that are most suitable for his particular case. However, if the customer insists on an inappropriate solution and it turns to be impossible to change his mind, we do not undertake such a project. And, thus, remain honest with both the customer, though a failed one, and ourselves.

CHALLENGING AND FAR OFF

EVERY PROJECT ALWAYS BRINGS NEW EXPERIENCE, REGARDLESS OF ITS GEOGRAPHY, SCALE AND TECHNICAL SOLUTIONS APPLIED. THE PRACTICE OF OUR RECENT PROJECTS REALIZATION IN SOUTH AMERICA IN 2016–2019 HAS ALSO PROVEN THAT SAWMILLS, ESPECIALLY LOCATED IN DIFFERENT CONTINENTS CAN BE VERY MUCH UNLIKE EACH OTHER.

The main reason for that lies to just a small extent in features of the wood species. It rather lies in the human aspect, which related to sawmilling is actually a mixture of mentality and understanding of wood processing as such. Although this mixture is in fact challenging for us as a producer, some special things are really interesting to recount.

One of them is log sorting line operation in a fully automated mode – with no operator to perform a visual log evaluation. On the one hand, an opportunity to optimize the yield at the stage of log sorting is not used. On the other hand, straight logs from the local plantations may not necessarily require a very thorough visual assessment and the customer is happy with just a diameter-based sorting. However, lack of continuous operator control over the line work is very unfavorable from the line exploitation and service life standpoint. In this case it is very easy to miss the signs of the equipment failure, which in its turn can cause the need of serious and expensive repair.

In the other project, which production capacity makes up some 100 th. m³ of timber, the total volume of logs is sorted by a conveyor of 6 one-sided bins (not delivered by Hekotek). This line is also equipped with a debarking unit, leaving no possibility to use the line for more precise sorting (by means of sending the same logs through several times). Our delivery for this sawmill includes an in-feed line for HewSaw R200 machine. For us is extraordinary that the customer rejected any log-turning units for the log in-feed.

All that obviously demonstrates that understanding of yield optimization as a notion is yet missing in this region – in contrast to traditional philosophy of sawmilling established in Northern Europe, where any sawmill is focused on the optimization, which by now has become the key issue of the branch development in the area.

300 mm step of the board length module accepted in Europe was not applicable in Uruguay. The trimmer was, thus, redesigned according to the customer's requirements for the module lengths 2500, 3020, 4000, 4500 and 5020 mm.

The same thing goes also for board handling lines. For the Uruguayan project of 300 th. m³ capacity we delivered a combi-line equipped with just 4 horizontal bins (one of them meant for rejected boards to be manually sorted). The choice of horizontal bin solution, however, is reasonable – to ensure careful handling of boards, which are very brittle here, when non-dried. A small number of sorting bins is compensated by the possibility to stack boards of different widths but same thickness into one package. From our side, in order to keep the package geometry, we also applied a special solution of moving 2–3 outermost boards of the layer to the edge of the package.

We understand that in future, when the time for optimization of both the production and raw material consumption comes at least to these two sawmills, there exist ample opportunities for that here. Implying a lot of work related.

So, the world diverse. And sawmilling in its different parts is not the same. However, we can see that e. g. in some instances the approach to sawmilling in South America is similar to the one in Russia. We admit that our engineers with Nordic experience do not absolutely agree with all the solutions chosen for the projects above. Still, it is important to consider not only own experience, but the customers' mentality and the situation.

European sawmillng is well on the way to the most rational use of raw material. We at Hekotek feel that our mission is to bring this philosophy to other markets. This process is not fast, but we take every effort to make the best solutions available for each market.

BRAZILIAN SUPPLIERS: WELL PROTECTED

Brazilian regulations for importers are created to protect the local manufacturers of technological equipment. One cannot import any used equipment here. As for the new machinery, it can be imported under reasonable taxation scheme only in case that no locally produced analogues exist in the Brazilian market. In case of non-complience, the import taxes significantly exceed the level of a reasonable rate. Unfortunately, for us such customs regulation makes up a serious obstacle in considering the Brazilian market to the outmost .

VIEWPOINT

Heiti Hallikma
Project manager
AS Hekotek

It always is a pleasure to deal with hard working and friendly people. Such are the member of our Brazilian customer's team. With no common language on site, the easiest was certainly to communicate with mechanics and engineers, where the main language is a drawing. However, all the others were not less striving to understand you and help.

Although safety regulation on site stand in stark difference to those we are used to in our regular markets, it was interesting to get acquainted with the local rules and follow them.

Not all the necessary tools were always available on site, however, the most challenging were our first days there. Afterwards it became much easier.

Because of the local terrain the project was not easy in terms of basement construction. Luckily the local engineers had enough experience in working with such terrain peculiarities.

To sum it up about the project: unusual but interesting for the European mind, not always easy. Competent, experienced and dedicated people.

AFTER-SALES SUPPORT

WHAT FEATURES A RELIABLE EQUIPMENT PRODUCER? GUARANTEED QUALITY OF THE EQUIPMENT SUPPLIED, FLEXIBILITY, ABILITY TO LISTEN TO CUSTOMERS AND CONSIDER THEIR NEEDS. NOT LESS IMPORTANT IN THIS LIST IS HIGH QUALITY OF AFTERSALES SERVICE AND SUPPORT, INCLUDING SUPPLY OF SPARE PARTS AND COMPONENTS.

Prompt delivery of wear and spare parts is not the end in itself. Neither is technical maintenance of equipment. Both serve the main goal – smooth and continuous operation of our customers' enterprises. With respect to that, any delivery contract of Hekotek includes documentation, which specifies consumables and components expected lifetime, as well as recommendations on preventive maintenance frequency. Some of the parts should be regularly changed, others – taken a closer look at. These are all smaller measures, and we strongly advise them to be regularly taken according to the time schedule recommended in the contract – to prevent serious equipment failure.

ABOUT 70 % OF ALL AFTER-SALES SUPPORT OF HEKOTEK IS ACCOUNTED FOR BY PELLET PLANTS, 20–25 % – BY SAWMILLS, REST – BY ASPIRATION SYSTEMS.

Our equipment for sawmills – mainly consisting of different conveyor-type equipment – is rather easy in terms of maintenance and spare parts related requirements. Up to 97–98 % of the necessary service the customers can implement themselves, through their own employees. Involvement of Hekotek technical experts can only be requested in case of serious equipment damage, mainly caused by its severe overload permitted by the customer.

As for pellet plant facilities, their after-sales service requires much closer attention of our technical staff. Pellet production equipment as such is expensive, consequently expensive are some of its components and spare parts. Still, equipment failure is always cheaper to prevent than repair – e. g. a pellet press regular maintenance is dozens of times cheaper than its repair, needed as a result of non-performed regular service.

DIFFERENT MARKETS

Our technical specialists are always available in case of problem encountered, ready to come in person or provide a remote consultation on a specific issue. Some of the parts recondition or repair we perform at the own premises of Hekotek. However, this service is only available for our customers from EU, since for customers from other countries it becomes quite a challenge to transport those parts to Estonia and back.

For instance, ordinary delivery of spare and wear parts to Russia takes long, due to customs clearance procedures, which can last for months without necessary preparation. That is why for Russian customers we recommend a certain set of spare parts and components to be stored at the plant for urgent replacement. In our Russian projects we also have an increased focus on educating the local technical staff – for the people to be qualified enough to implement necessary service and maintenance of our equipment.

In this market, due to the fixed hierarchy, it is often uneasy for technical staff to reach out for the plant's top managers or owners to get necessary budgeting of e. g. dies and rollers replacement, which is a costly affair. In this respect, the situation at our European customers' is more favorable – they fully understand the notion of equipment lifecycle, where initial investment related to the equipment purchase is just a part of all necessary costs related to its exploitation.

Generally speaking, all our customers differ from each other – in set of mind, financial state and some other aspects. However, on the whole they all want the same thing – a trouble-free operation of their production facility. And the team of Hekotek after-sales department in close cooperation with each of our customers do the best to undertake this mission.

ORIGINAL OR NOT?

LONG-TERM EQUIPMENT OPERATION IMPLIES CHANGE OF SPARE PARTS AND COMPONENTS, SINCE NOBODY KNOWS YET HOW TO PREVENT MACHINERY FROM NATURAL WEAR AND TEAR.

Original parts and consumables always guarantee sustained performance of equipment. For the customer it means a possibility to plan his workflow with no nasty and painful surprises.

An original is always worth more than a copy. Why do customers choose non-original spares then? It is usually related to an attempt to minimize the costs, as such parts are cheaper by default.

In this case, however, one should be ready for their non-consistent quality, wrong material, etc. – there is always a presumption of a failure and, as a result, down-time and production losses. That is why the choice of non-original spare and ware parts is not actually a problem, but rather is a risk-tolerance of a certain customer.

VIEWPOINT

German Kesa
After-sales manager
AS Hekotek

Being an essential part of after-sales, wear and spare parts delivery terms depend on the continuously changing situation in the global market of equipment. For example, delivery terms for dies have recently increased as much as twice – from 8 weeks in 2017 up to 16 weeks today. We closely monitor the situation in the market and regularly conduct a thorough check of our customers' potential need in different spare parts and components for the near future. It is especially important for the parts to be long waited – to order them just in time for the moment of their planned replacement at a certain enterprise.

Regular maintenance service, spareparts and components availability are key factors to ensuring continuous and trouble-free operation of any equipment complex.

LARGEST PROJECTS REALIZED IN DIFFERENT YEARS

Hekotek

LDK Igirma JSC
(Russian Timber Group), Russia

Lesosibirsky LDK No. 1 JSC
(Segezha Group), Russia

Lesozavod 25 JSC
(Titan Group), Russia

Purutuli OÜ, Estonia

Stora Enso Imavere, Estonia

Stora Enso Gruvon, Sweden

Swoods Export FLLC, Belarus

Tigoral S. A., Uruguay

Uddevalla Kraft, Sweden

ULK Group of companies,
Russia

Vara Saeveski OÜ, Estonia

Viiratsi Saeveski AS, Estonia

AS HEKOTEK

Põrguvälja tee 9
Jüri, Rae vald, 75306 Harjumaa
ESTONIA
Tel. +372 605 14 50
www.hekotek.com

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