

Valmet Technical Paper Series

Partnership Agreements

Executive Summary

Increasing economic pressure means mills have fewer skilled personnel to do an increasing amount of work with less capital available. With this in mind, Valmet offers a range of agreements for those mills looking to increase performance and profits while controlling costs; these encompass hourly service contracts, audits, planning assistance, rolls, parts and consumables contracts.

Every agreement is based on each mill's specific circumstances, which typically involve performance, reliability and efficiency. Every mill is unique – one may want to decrease energy use while another needs to improve product quality.

An agreement with Valmet is composed of various modules which reflect common goals agreed by the mill and Valmet. The modules may include elements such as various types of equipment, services, maintenance strategy, personnel training, improving product quality or reducing total cost of ownership of consumables and spare parts.

Examples of different agreements and their components are presented, along with the results that have been achieved. The more extensive the agreements are, the more Valmet and mills develop a partnership for long-term mutual benefit.

Partnership agreements provide stability and expertise

The first section of this white paper seeks to introduce longer term agreements, and define the basic elements that can make up an agreement, as well as the basic types of agreements.

Introduction

The purposes, methods of delivery and business partnerships defining pulp and paper industry services are changing and have been for some time. The pay-as-you-go or on-request services of years gone by are diminishing and longer-term agreements between Valmet and its customers are in the forefront. Such agreements can cover, for example, complete maintenance outsourcing, roll maintenance services, supply chain management of consumables and process improvement programs.

These agreements and the Valmet - client business relationships behind them are based on maintenance effectiveness, pulp and paper making performance as well as good delivery logistics, inventory control and cost management. Of course, our papermaking know-how developed over many years in a wide variety of mills is an important element which adds even more value to these services.

Not just for maintenance...

There is a clear trend that a growing number of mills are looking to outsource non-core business processes. A prime example is maintenance outsourcing which now has an important role also in Valmet's services portfolio. That's a subject for a white paper in itself...

There are other success stories, however, in other less attention grabbing areas such as comprehensive solutions regarding roll covers and production consumables like fabrics, roll covers and doctor blades. The logic of being able to reduce the cost and performance risk of consumables is compelling.

Many years of agreements development

In the words of Kari Lindberg, Vice President of Services in North America, "Valmet started evaluating what changes were needed to services over a decade ago. There were several enquiries for longer-term agreements so we turned around our approach and methods. We began talking about mill needs for process performance, quality and reduced lifecycle costs. Today, our contract-based business is the norm because that is what mills are looking for. We have learned from second-generation contracts and are now forming third-generation agreements. Agreement customers have seen the value and believe they can save money by working with Valmet – as seen by the large number of renewed contracts."

Papermakers are looking for a partner who can help them to improve the total process and that is where Valmet has an advantage with our process expertise and global-scale outlook. We can help to continually improve operational performance and competitive position.

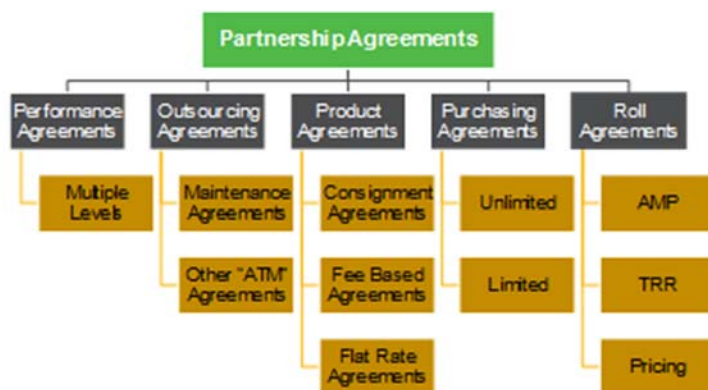


Figure 1. Typical agreements involve many areas and components.

Agreements are based on a variable mix of components

To address mill needs, Valmet has introduced many new and innovative service agreements over the past years (Figure 1). Some of the highlights include:

Flat rate: As an example, Valmet offers contracts for machine fabrics that

provide paper mills with fully predictable annual costs over a period of 3 to 5 years. Valmet manages the fabric replacement scheduling and inventory replenishment. With this type of agreement there is an incentive for both partners to improve fabric longevity and performance. A Valmet-owned inventory frees up working capital for the mill and reduces administrative costs.

Roll service: All aspects of roll maintenance and on-machine performance are managed by Valmet, including the scheduling and logistics of roll cover regrinding and cover replacements. These cooperative agreements also encourage prolonging cover life, improving on-machine performance and reducing operating costs such as energy.

Consumables: Valmet manages consumables inventory and availability based on mutual goals for parts performance and process uptime. Consumables include doctor blades, slitters, refiner segments, screen baskets, machine clothing, sizer beds and rods, headbox sheets, dewatering elements, chipper blades... the list goes on. This releases working capital and reduces mill administration costs.

Performance: Also called Process Support Agreements, these target mill needs for higher productivity and/or efficiency along with improved competitive product quality and lower operating costs.

Maintenance outsourcing: Valmet assumes total responsibility for a turnkey maintenance program to ensure the production line is operating at world-class levels. Unscheduled downtime is reduced and significant cost savings are achieved.

How is an agreement put together?

Valmet has established hundreds of long-term agreements in several areas, including maintenance outsourcing, service cooperation, roll service, consumables, fabrics and energy saving (**Figure 2**). Mills benefit by being able to guarantee access to Valmet expertise and stable pricing, while Valmet in turn is able to stabilize and better forecast workload.

The first item on a long-term agreement agenda is to determine the mill's goals. The possibilities are virtually endless, including: energy savings, improved quality and defect-free products, increased production, innovation and best technology, cost saving ideas, on-time deliveries, longer product lifetime and value-added services.

These goals are typically described in terms of Key Performance Indicators (KPIs), as seen by the mill in order to evaluate their effectiveness. Valmet then creates parallel KPIs that help keep us on target during the agreement partnership.

After setting the goals, a long-term agreement is assembled by Valmet, mill and corporate personnel that contains the tools and services to meet the stated goals. The scope of the agreement may only include one area, such as roll covers or fabrics – or it may be machine section or production line related. Additionally, a particular long term agreement may



Figure 2. Long-term agreements are a worldwide emphasis for Valmet. This graphic shows only a fraction of Valmet's current agreements.

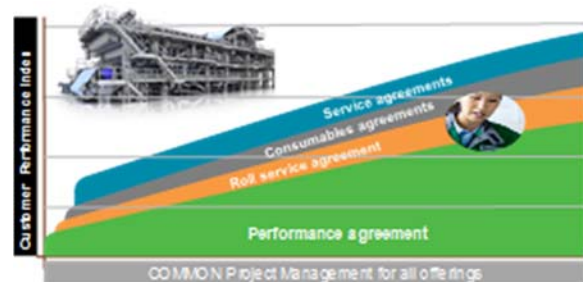


Figure 3. A common project management team underlies the combination of service agreement elements for the best results.

run concurrently or overlap one or more other agreements at the same mill or corporation. Regardless, for agreements with Valmet the combination of agreements and their elements will be managed by the same project personnel (**Figure 3, previous page**).

The type of agreement may be simply a set price or cost vs. volume (purchasing) agreement – or it may be more comprehensive and include various programs such as DoctorCare, Slitter management (each having their own parts, consumables, training and onsite service elements) – or even more sophisticated such as a performance agreement. In the case of roll agreements, the Total Roll Reliability (TRR) or Aftermarket Partnership (AMP) agreement styles are popular with most mills.

Let's look at the smallest form of agreement, one consisting of a program, in this case DoctorCare...

Example agreement component: DoctorCare program

Every doctoring process can be improved. The usual investments required are minimal. Optimizing your doctoring processes results in better runnability, improved quality, optimal production efficiency, reduced maintenance costs and improved safety and environmental effect. Similar to the 360°Rolls program (see separate white paper entitled *360°Rolls – performance and cost*), the elements of the DoctorCare program range from the minimum "Maintain" to the maximum "Optimize" (**Figure 4**).

DoctorCare is a combination of a partnership and a consignment program. The partnership component involves products and services to optimize blade performance and reduce total cost of ownership. The consignment component includes blade handling equipment to reduce safety incidents and inventory management which can work with mill ERP systems.

Both programs can further include services such as:

- assisting to solve doctoring problems
- training operators in the proper use of blades
- helping to create safety procedures and standard working procedures
- discounting doctor blades and all types of holders, including composites
- shutdown services such as changing hoses, holders and bearings

Typical solutions achieved by mills using DoctorCare include:

- increase operator safety
- savings and improvement possibilities with continuous optimization
- improving blade life and product quality through materials and training
- recycling and regrinding of blades
- optimization of the carbon content in doctor blades



Figure 4. The DoctorCare program seeks to maintain, improve and optimize your doctoring systems.

- optimizing loading pressure, doctor blade angle, doctor blade holder, lubrication and shower setup
- optimization of doctor beam and oscillation

For example, in the area of recycling and regrinding doctor blades, for one mill the process included cleaning, quality control, blade profile measurement, regrinding to 3.15" or 3.00", labeling, packing and delivery. The result – blades that look like new blades.

In another example case, a mill committed to use Valmet storage units and blades for twelve months. After signing the agreement contract, Valmet delivered the following services:

- conducted a doctoring audit for the machine to determine the current doctoring status
- storage equipment (BladeCarry and BladeStore)
- consignment of currently utilized doctor blades to the BladeStore units beside the machine
- blade lists and blade machine positions drawings

After the first machine down Valmet:

- educated all shifts on the use of the BladeStore and BladeCarry units
- together with the mill doctor contact, installed Valmet doctor blades into the machine
- proposed short and long term optimizations

In this case, the mill's best fit choice was for mill personnel to handle regular blade changes and maintenance, and for Valmet to take care of everything else (Figure 5).

Next we'll review a few of the most common types of long term agreements – performance, roll and purchasing – to show the benefits of each and when they would be of most use to pulp and paper industry mills and corporations. First, performance agreements...

Performance agreements guarantee results through partnership

Valmet's performance agreement is a millwide development program targeted at perfecting the mill's production line. Following this systematic development approach, Valmet improves and maintains the mill's competitiveness. Previously known as the cooperation agreement, the focus was mainly on paper mills and on a much narrower scale. With the new approach, the focus has been broadened with a new and larger mill-wide perspective.

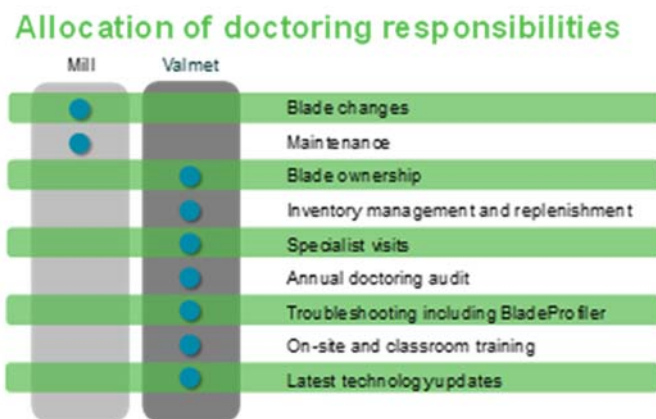


Figure 5. In this example, the mill chose Valmet to fully optimize their doctoring processes.

Success is always a team effort

"Valmet's performance agreement is a cooperation process in which both parties are committed to achieving common targets," says Ilpo Turunen, Senior Manager, Performance Services (**Figure 6**). The performance agreement can be seen as a tool for excellent production, efficiency and end product quality improvement, maintenance development, and cost reductions. It is based on Valmet's ability to serve as a full-scope supplier, offering tailor-made solutions for any kind of need. Every agreement is tailored to match mill targets and situation.

Agreements have included machine speed and production development, quality optimization, and efficiency improvements regarding maintenance and production costs. "Industry is evolving, and nowadays companies are more interested in cost efficiency rather than speed increase," says Turunen. In his view, the expertise of strong local service providers can be capitalized on all over the world through performance agreements: "We are close to our customer, while utilizing strong internal know-how through Valmet's global network."



Figure 6. Ilpo Turunen, Senior Manager, Performance Services, believes that trust is always the basis of good results. "Strong relationship enables mutual benefits," he says.

Targeting successful start-ups, efficiency improvements and maximum profitability

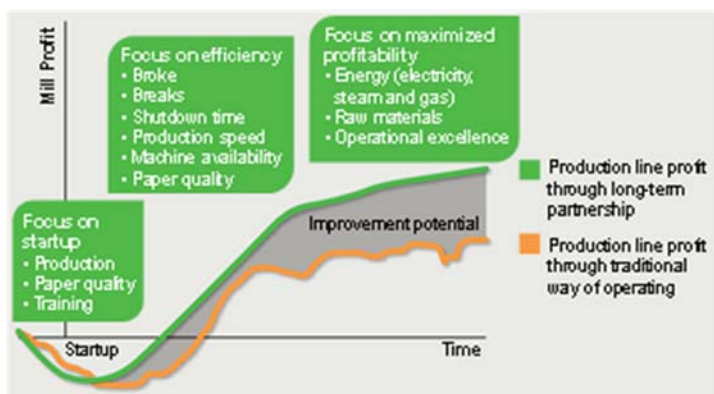


Figure 7. The goals of Valmet's assistance are different, depending on mill needs.

Turunen explains that mills typically need Valmet's services in three kinds of cases: successful start-up, efficiency development and maximizing profitability (**Figure 7**). In the case of start-ups, the goal is to help the mill set up new production. The goal is to achieve the defined targets related to production and paper quality. "In start-ups the purpose is to get everything out of the machine according to the design," he says.

The second case focuses on developing production lines that have been working already for several years. The amount of effort put into maintenance tends to decrease over time. This reduces operational reliability and efficiency, and causes the performance of the machine line to gradually erode. In these cases the typical focus areas are maintenance development, personnel coaching, and improving processes through small investments. "We also help customers solve their bottlenecks," says Marko Summanen, Valmet's Director of Agreements and Mill Improvements. The purpose is to raise efficiency by decreasing lost time and improving production, like reducing breaks, failures and unexpected shut-down times. As a result, mill competitiveness level increases. In today's market environment some mills are changing their production from, say, paper to board. They can benefit from Valmet's wide benchmarking data and technical expertise as well as business know-how while penetrating into a new market.

The third case, maximizing profitability, includes both new and old machinery. The main objective is to maximize profitability and reduce the cost of each ton produced by focusing on optimizing operations

and using the latest material and energy-efficient solutions. "Many mills want to produce at a given level, but to do so as efficiently as possible," adds Summanen.

The best performance needs the best team

A performance agreement involves bringing the best resources to bear, aligned to solve the mill's targets – i.e. the best team (**Figure 8**). A tailored process starts with a visit by onsite specialists who analyze the situation by using measures such as audits, surveys, condition testing, and troubleshooting. The results are then benchmarked using Valmet's global network and large installed base. "We know what is happening within the industry so we're able to provide the latest information to our customers," explains Summanen. Benchmarking makes it possible to evaluate the key development areas and development potential and set realistic targets. This builds a foundation for long-term improvements.



Figure 8. Typical organization of a performance agreement team

Targets are reached by adopting a systematically advancing step-by-step process which includes various elements. Named contact persons (agreement manager, steering group) ensure that goals are taken efficiently towards solutions with the help of common action plan. Process analyses and remote diagnostics are used to study the situation. Specialists, development teams and onsite support provide first-class expertise at the mill. The process also includes training and regular contacts with the customer mill, in addition to service actions and preventive maintenance. The improvement process is measured using key performance indicators (KPIs) that are set together with the mill (**Figure 9**).

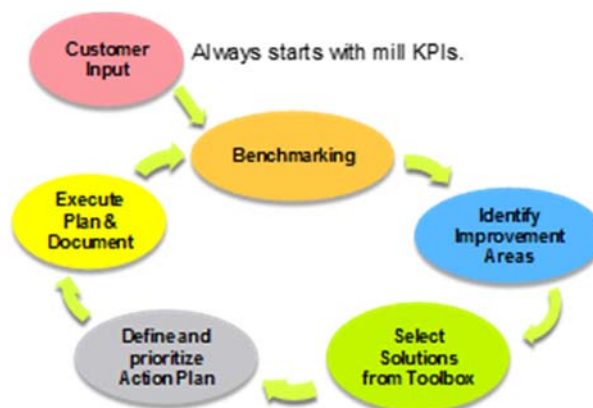


Figure 9. A performance agreement is tied to Key Performance Indicators (KPIs). The KPI plan is developed and regularly reviewed by the team.

Summanen explains the nature of the Valmet performance agreement using an example from the world of sport: "Imagine a new coach for a professional football team. The coach doesn't come up to a wide receiver, probably a track star quality runner, and start telling him how to run. Instead, the coach, with his offensive coach and others, together finds ways for the player to reach the highest possible performance level. The best athletes are supported by the best possible coaching teams. That's how Valmet performance agreements work. Our main purpose is to help mills succeed." (**Figure 10**)

The next type of popular agreement to discuss is the roll agreement where Valmet takes responsibility for various services for multiple rolls in the machine line...



Figure 10. Marko Summanen is satisfied with the new performance agreement approach, "Systematic step-by-step process enables us to provide tailored and efficient solutions for every customer."

360°Roll™ agreements for added value

Roll service agreements are becoming a more common option among papermakers to ensure continuous roll condition and performance. With a roll service agreement the mill can lock in prices for a certain period as well as reserve expert capacity for their roll maintenance and roll covering needs.

A comprehensive roll management agreement provides an opportunity to ensure that rolls can be utilized to their full potential. With combined targets and joint expertise better results can be achieved not only in terms of performance and service intervals, but also in annual maintenance cost savings.

The goal of 360°Rolls agreements is to ensure that mills can meet the requirements set for their operations. Valmet helps the mill maintain high levels of equipment operations, improve efficiency, and give all-round cost-control of their roll maintenance spend. By setting common targets, the performance of rolls can be raised to a completely new level.

360°Rolls agreements are an efficient way to minimize the lifecycle costs of rolls. This is achieved by optimizing roll maintenance intervals, adopting best practices related to roll covers, and reducing the number of roll failures. A 360°Rolls agreement is not only a question of maintenance, it is also about making sure the mill has the right technological solutions in place to improve efficiency.

All reports and documents developed during the agreement period can be logged on the mill's own maintenance management system if so equipped. Valmet's Roll Tracer program may also be used to track runtime, operating characteristics and maintenance of rolls (more on this later).

Before entering an agreement, a specified target for the program is agreed with the mill. An advanced roll audit will be performed to find out the past behavior of the rolls and their current requirements for roll maintenance, intervals or any needed process improvements. In most cases, reconditioning of the rolls is enough, but in some cases roll improvements, modernizations, cover changes or complete replacement is required to achieve the target.

The most modern paper machine roll technique, like the sliding bearing arrangements, can be quite complicated from a maintenance point of view. To service sophisticated process rolls in a professional way requires special equipment. This, combined with longer service intervals because of the advanced design of the rolls, makes the service agreement a feasible option for mills. Investing for themselves in the special equipment and expertise required for the maintenance of process rolls is not a very profitable option for the mill, if there is not enough use for the equipment.

When an existing paper machine is rebuilt, new roll designs usually replace old ones. Instead, and in addition to new rolls, most of the existing rolls can be cost-effectively modernized to correspond to today's papermaking requirements.

All roll management programs are tailored according to mill needs. There are a number of different types of roll service agreement available, such as a Yankee grinding agreement, roll maintenance agreement and roll covering agreement. As the mill looks forward to more cost savings, the traditional services move to value added and extended services as seen in **Figure 11 (next page)**. In the most basic case, a cover agreement is arranged. The next level of service is Total Roll Reliability (TRR), where a joint development team meets regularly to assure roll lifecycle best practices are followed (**Figure 12, next page**). The highest agreement level is the Aftermarket Partnership (AMP) where continuous improvement becomes the main focus.

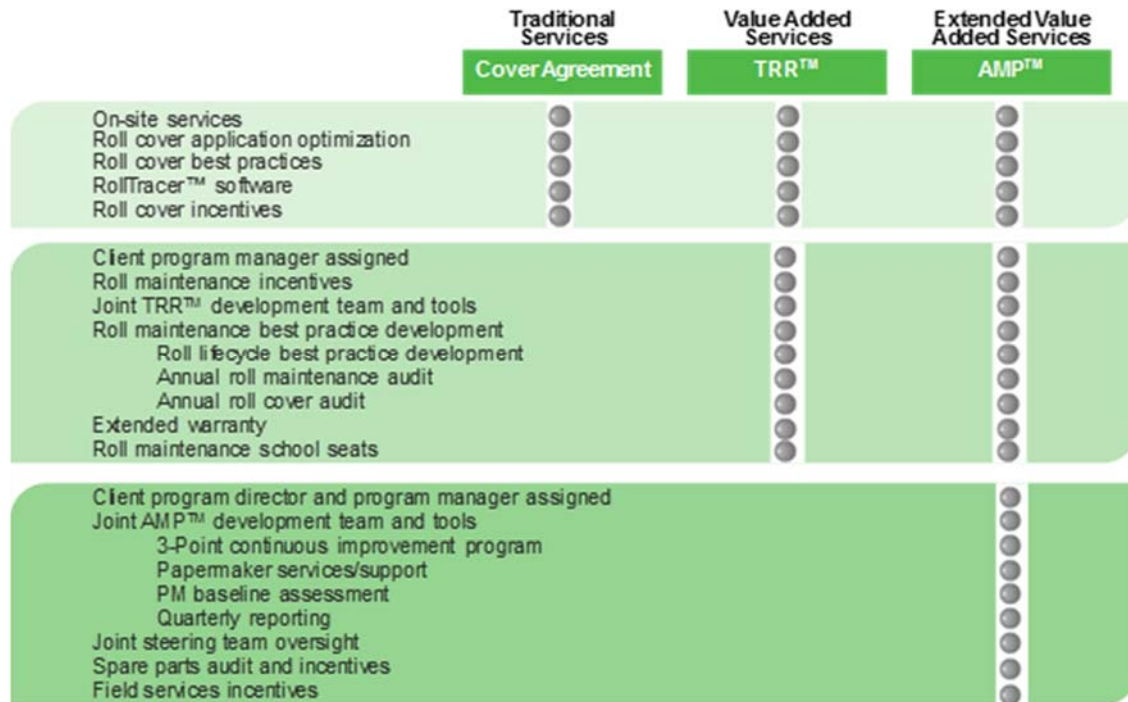


Figure 11. Tailored roll agreements extend traditional roll services to joint development between Valmet and mill personnel.

TRR uses strategic roll modernizations to improve roll performance to a higher level than when the roll was new. This allows higher machine speeds, increased operating reliability and maintenance intervals, improved paper quality, reduced or eliminated maintenance problems and roll cover optimization. The modernization concepts apply to all kinds of rolls regardless of the original manufacturer. Valmet assists the mill roll team to develop standard operating procedures for roll shop work for each roll included in the agreement. TRR often includes an extended warranty for any roll that is part of the agreement.

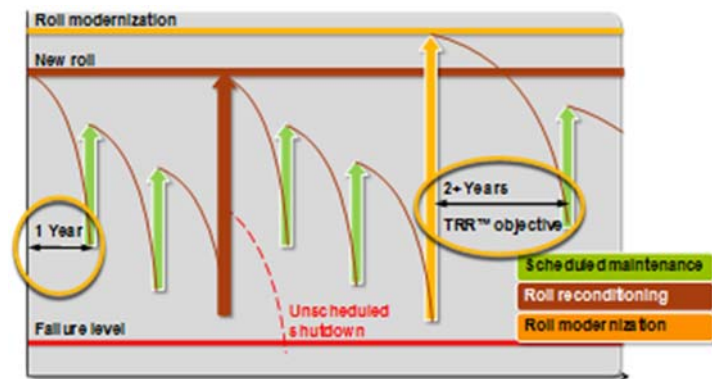


Figure 12. Total Roll Reliability (TRR) agreements focus on extending the lifecycle of rolls in the papermachine.

Additionally, Valmet provides critical support on shutdown days. These include sigma nip services, cover inspections, roll maintenance inspections and doctor blade inspections for covered rolls. Valmet provides all needed special tools such as plastometer, sigma nip hardware/software, durometer testing gauges, profilometer, pi tapes and IR guns. The resulting inspection reports (**Figure 13, next page**) are detailed, including color-coded diagrams explaining the condition and recommendations for every roll.

Roll Mechanical Audits are performed to learn the past behavior of the rolls and document current requirements for roll maintenance intervals or any needed process improvements. In most cases, reconditioning of the rolls is enough, but in some cases roll improvements, modernizations, cover changes or complete replacement is required to achieve the target. Roll modernization can improve roll performance to a higher level than when the roll was new.

Valmet and the mill also establish roll cover standards and incorporate them into Roll Tracer. The information can include pressing optimization calculations to enable grade specific benchmarking, product quality improvements and energy reduction. Valmet performs an annual review of roll cover best practices and points out opportunities for cover run time optimization and overcoming operating issues.

Roll Tracer III, Valmet's proprietary roll management and tracking software program, is recommended as part of TRR and AMP to monitor roll performance, and is always included as a complementary option. The program is in its third generation and is constantly being developed. Data is secure with multiple access levels via password. The system provides roll status information 24/7 and is accessible from any Internet connected device such as a tablet. Roll Tracer also serves as a repository for all roll specification and roll history, including costs, run time and budgeting, by individual roll or roll position. All roll level inspection reports are available online.

When Valmet sets up Roll Tracer as part of an expanded roll agreement, roll layout diagrams are generated for the machines, after which the roll and position lists are populated. Three years of Valmet roll shop history is entered into the system, including all shop work. After the system is setup Valmet provides comprehensive Roll Tracer (Figure 14) system training in conjunction with mill identified "roll champions."

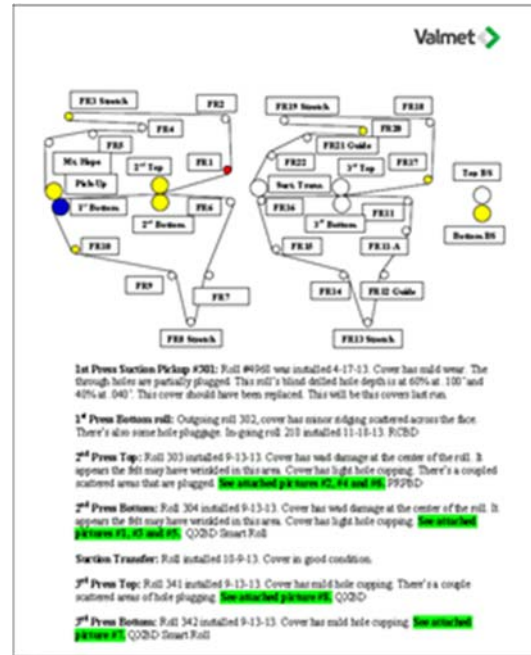


Figure 13. Comprehensive roll audits are performed, with inspections during shutdowns and detailed reports, as seen in this example.

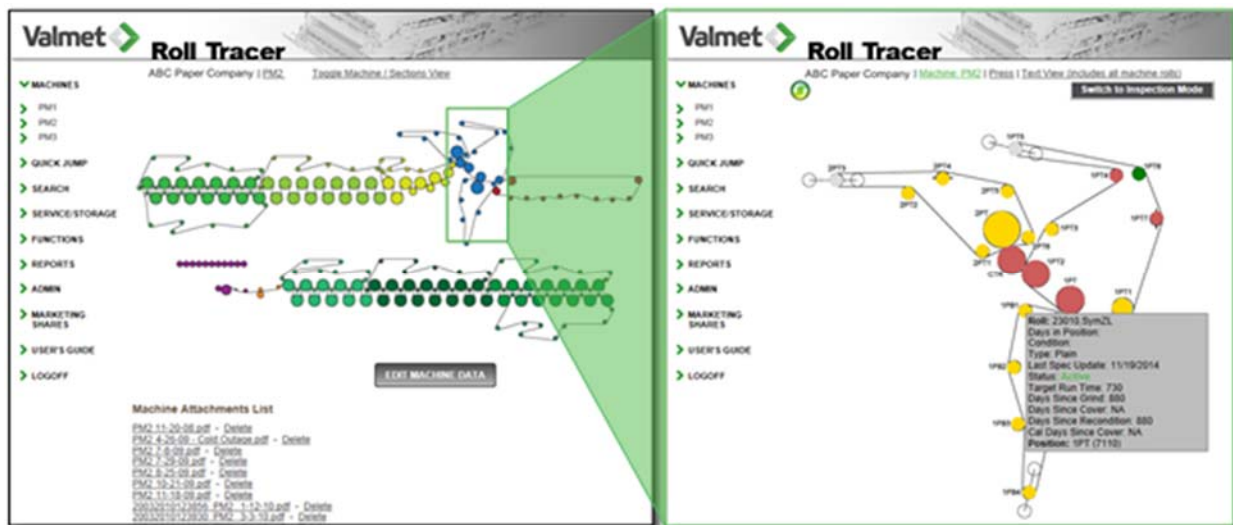


Figure 14. Roll Tracer provides color coded roll status, roll history, spares tracking and inspection information for critical rolls in any position on the machine.

The most advanced roll management agreements aim to increase cost savings and improve paper machine operating efficiency. These agreements can include some or all of these items: roll audit, training, periodic

onsite roll inspections, optimized roll maintenance program scheduled according to the paper machine shutdown plan, roll covering agreement, replacement roll / shell recommendations, and mill maintenance management system updates.

Valmet's 360°Rolls agreements are always tailored to meet specific customer needs (Figure 15). The range of services is grouped into three levels: Maintain, Improve, and Optimize. The choice of service depends on the type of involvement you would prefer. More information on 360°Rolls agreements may be found in an existing Valmet white paper "*360°Rolls – performance and cost.*"

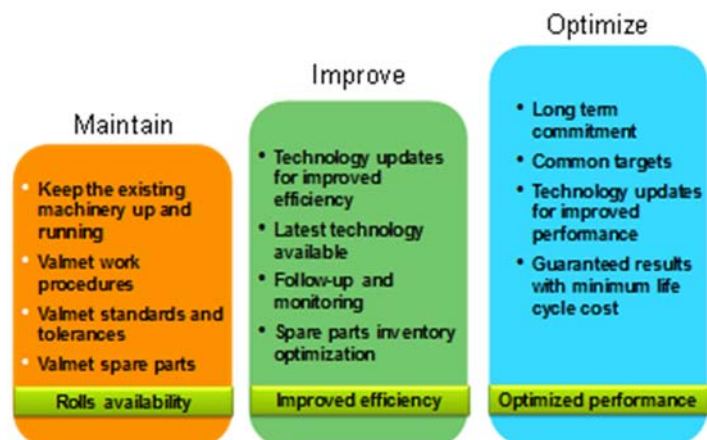


Figure 15. Valmet's 360°Rolls agreements' levels seek to maintain roll availability, improve efficiency and optimize roll performance as the agreement becomes more forward-looking.

A final element of most roll agreements is seats in Valmet's Roll Maintenance School. This training includes class room sessions, group problem solving and shop demonstrations with hands-on training with mics and plastometers and one-on-one discussions with roll repair specialists.

The last agreement type to review is the purchasing agreement...

Purchasing agreements provide product expertise and pricing stability

Valmet offers different purchasing agreements based on the mill's need to reduce costs and ability to modify purchase volume to adjust price. These incorporate elements of pricing, volume, credits, continuous improvement incentives and a total-cost approach.

Total Cost of Ownership (TCO)

Valmet's approach in each agreement is total cost of ownership. We look at everything we do with the mill from the point of view of TCO – the volume of products delivered, the specific services provided – everything.

Measuring how much it actually costs to own something can be a difficult process. There is no exact formula to calculate TCO and every company classifies their TCO differently. Valmet has taken a TCO approach where we recognize the added value when customers do business with us. In most cases value is tangible as in the cases of accrued savings or improved efficiency. But sometimes the value can be more difficult to see and can further be embedded in other services offered like, for example, free of charge expert visits.

Regardless of the magnitude of the cost, it's important that all costs and savings are captured and documented so that the true total cost of ownership can be calculated. A good example of this is a suction roll modernization where mills typically consider only the rebuild costs while forgetting other TCO components such as the maintenance interval, cost of future updates and downtime needed to install the roll, just to mention a few. This comprehensive view of TCO is how Valmet wants to structure our partnership agreements. Instead of looking at the initial investment cost, we together with the customer, follow the total lifecycle cost.

Figure 16 illustrates the new TCO approach where Valmet together with the customer captures all costs and savings.

Parts catalog model

With the parts catalog approach, parts pricing is uniform across the customer's organization, with every part at the lowest available price. Prices are fixed for an agreed upon term. The customer is guaranteed ready access to vital parts with a 24 hour maximum delivery. Inventory carrying costs are minimized.

ePartsbook™ tool for quick access to mill-specific equipment information

Hundreds of thousands of items are included in Valmet's parts catalog, which are all accessible electronically via the ePartsBook software (**Figure 17**). ePartsbook is a highly flexible, electronic spare parts catalog that provides easy access to bills of material, mechanical parts drawings, component drawings, diagrams and other important machine documentation specific to your mill requirements.

eServices™ tool for online in-depth spare and wear parts information

If the part for which you are searching is included in Valmet's eServices system, simply click on the link to open the item's details in eServices. You may request a quote from the eServices screen which is available via the Internet and works well on both desktop and mobile devices. eServices provides in-depth part information (**Figure 18**) by part number.

Consignment, dedicated inventory and fee payment plans

Future options with the parts catalog include: consignment of selected parts, consignment of all parts,

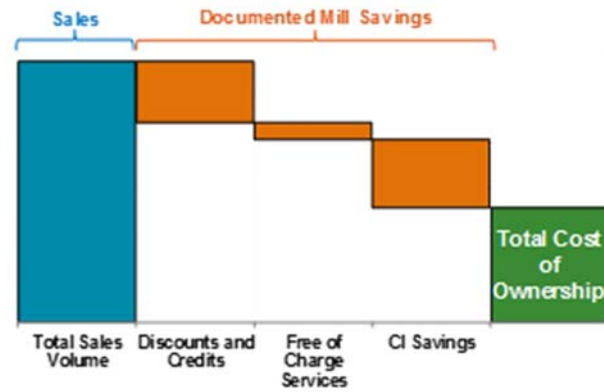


Figure 16. The Total Cost of Ownership (TCO) of mills using Valmet purchasing agreements and Continuous Improvement (CI) charters is significantly lower.



Figure 17. The ePartsbook interactive parts catalog simplifies the parts ordering process.



Figure 18. eServices provides in-depth information online for over 700,000 Valmet spare and wear parts.

dedicated inventory – fee based and no purchase, dedicated inventory – defined term and purchase, and flat fee payment plan. With fee based dedicated inventory, Valmet maintains an inventory of all requested parts with a 24 hour delivery for a percentage annual fee and there is no purchase at the end of the agreed term. With defined term dedicated inventory, Valmet inventories and delivers in the same manner, but prices are escalated annually based on Product and Manufacturing Information (PMI) with an annual cap, and the mill purchases at the end of the agreed term. With a flat fee plan, there is a set monthly fee for spare parts which fixes the monthly and annual spend; variance is rolled into the next year's payment schedule (Figure 19).

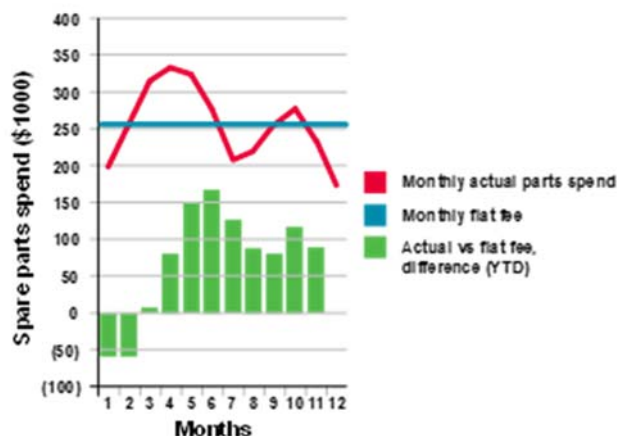


Figure 19. The flat fee parts payment plan fixes monthly and annual costs for the mill.

Volume credit model

Another purchasing agreement model involves Valmet giving the mill a volume credit including agreed parts and services (excluding capital purchases). Agreements are typically valid for three to five years. The corporation or mill is not required to purchase a particular quantity, volume or dollar value of goods from Valmet, however the higher the volume purchased, the higher the resulting purchase credit. Valmet submits mill-specific prices lists for the agreed products.

In addition, a volume credit purchasing agreement may contain other value-added services such as onsite audits, expert services, spare part optimization and seats in Valmet's Papermachine Maintenance or Roll Maintenance schools. At the higher purchase volume level, an optimization steering group is established.

Continuous Improvement (CI) program

With most agreements, Valmet will implement a Continuous Improvement (CI) program that will generate savings initiatives of an agreed percentage of the committed mill's product spend level. Valmet will work with mills to identify areas of savings in energy, materials, labor and additional production to increase mill profits. This typically follows a continuing four-step process:

1. Identify the mill needs, and establish KPIs
2. Identify the potential continuous improvements (CIs) we can provide.
3. Implement the improvements.
4. Document the results to demonstrate value.

The mill and Valmet will co-develop and sign a continuous improvement project charter for each project. A steering group composed of mill and Valmet personnel will oversee all CI projects. The combination of discounts, rebates, and CI projects significantly lowers the Total Cost of Ownership as seen in the example shown previously in Figure 16.

Summary

The concept of agreements has many facets – all ultimately based on each mill and corporation's needs. Thus, similar to blind men describing an elephant, a successful agreement between Valmet and a mill will appear different to almost every mill. In all cases, however, the more comprehensive and long term the agreement, the more partnership is required between the mill and Valmet.

With hundreds of agreements delivered now, Valmet is ready to tailor an agreement to your mill's needs, whether it involves rolls, maintenance outsourcing, performance, spare parts, consumables, services, planning, optimization or continuous improvement. We have walked down the agreement path for over a decade now and have learned much from our journey that we can share with you in order to increase your profitability.

This white paper combines technical information obtained from Valmet personnel and published Valmet articles and papers.

Valmet provides competitive technologies and services to the pulp, energy and paper industries. Valmet's pulp, paper and power professionals specialize in processes, machinery, equipment, services, paper machine clothing and filter fabrics. Our offering and experience cover the entire process life cycle including new production lines, rebuilds and services.

We are committed to moving our customers' performance forward.