0:04

Hello, and welcome to our webinar on how to deliver automation and productivity film extrusion. Well, it will focus on Automated Shell and Castro Cleaning surface treatment and cast film extrusion plastic sheet extrusion, and blown film extrusion.

0:22

My name is Christina ... and I will act as your webinar moderator facilitator today. And with me, I have our experts and cleaning ..., an expert in surface Treatment, Alexander. Now today, you'll hear some interesting facts about the four critical pillars and found an extrusion and what those mean to the market and why they are important.

0:43

It's about operator, safety, process efficiency, energy consumption, and quality consistency. And we'll go through the applications used in this industry and how the things are implemented will go into depth into surface cleaning, surface treatment covering the technology innovations, market opportunities, implementation, outcome, and best practices. And at the end of this webinar will also have a Q&A with our presenters.

1:10

If I introduce our presenters to you and we moved on with the presentation, I would like to share some housekeeping rules. So firstly this webinar is recorded and it will be sent to you automatically via the GoToWebinar system afterwards as we all are right now in a pandemic. and we're all sitting in our homes. You may experience some technical difficulties also with our connections, but we hope that you bear with us.

1:33

As you can see, our presentation is available as a handout, independent pane, and your microphones are muted. But for any questions you might have, we encourage you to use the Q&A function by by pressing the question mark at the bottom of your screen.

1:49

Please also State for whom you are, this question is for if it's from a TS, right, that's for Alex.

1:55

If you access to this webinar on demand or through a smartphone, the interface is slightly different, but the concept is the same. Look for the question mark or the chat function.

2:05

Should we not have time to cover your question, We will also, at the end of this webinar show, you will get answers. And as a quick note, before we continue, I will like to ask you to help us to grow an approach, but giving us your feedback at the end of this webinar, there will be a pop up window with questions, which we hope we can spend a few minutes on. This survey will also be e-mailed to you in the follow-up e-mail. Please note that if you fit in the popup window and then the e-mail survey. It is your last entry that we see. So, this survey is an excellent place for you to post a request for a live demo, the technology we're presenting today, or maybe if there is a question that we didn't hear, that you didn't get to before. So, alright, now let's move on to our presenters.

2:50

Our first speaker today is ..., Martinez has been evolving for almost 13 years. He is a sales director of industrial application with deep knowledge of cleaning systems, particularly for the plastic film industry. And throughout his career in education, is getting a thorough and deep understanding of the market, and technically meet needs of the printing and process industries.

3:14

And then I think the speaker is Alexander ....

3:17

Alex has been with all brands for 18 years, and all brands have been evolving company since 2017.

3:24

Is a product manager with full insight into the all brand product lines of drying surface treatment and rotor spray, as well as all applications focus. So as long career in education, he has become an industry thought leader with a steep technology expertise.

3:42

Quick facts about Baldwin Baldwin is the 100 plus year old company headquartered in the US. We provide process automation, technology solutions across a wide range of industries. As you can see on the screen. And we're located in 21 locations around the laws, are credit lines covering the entire process from start to finish. And if we look into plastic film extrusion Baldwin is a strong partner with a broad range of technologies and long experience. Our systems are set up to work perfectly in tandem with install systems and we off a thorough service and support as well as a strong company Vision.

4:19

Now let's look at the four pillars and plastic film extrusion. I'm going to turn the word over to my T S.

4:31

Thank you, Christina for the introduction, and also hello, and welcome from my side.

4:38

My name is Mathias Snow.

4:40

And I will guide you through the next couple of slides.

4:44

And I'm happy to have you here on the webinar and thank you for joining today.

4:50

As Christina said, What are the four main pillars, which are justifying a cleaning system in extrusion industry?

5:01

The first of it is Increase Safety.

5:05

That means that with an automatic tunings system, we are convinced that to your production will become safer as it is more or less hands off process. So that means the operators don't have to touch anything on the machine anymore.

5:21

Also, it will create more efficiency, higher efficiency, faster turnaround times, um, basically, because when you do automatic cleaning, you don't have to stop, stop the machine anymore for feeding, for example.

5:39

Now, when you don't have to stop the machine anymore, you don't have to restart it after training.

5:45

So that helps you reducing energy.

5:47

So it is also a kind of eco friendly system, helping you to, to work with a more eco friendly production.

5:58

And last but not least, it will enhance or at least stabilize.

6:05

your quality.

6:06

Uh, by taking out all the problems you have on your daily business when you run an extrusion machine was menu feeding.

6:16

Having to stop the machine, having all kinds of residuals may be impacting your film.

6:22

All of these headaches will go away.

6:27

Christina?

6:32

Now the question is, is Surface cleaning an option?

6:38

Yes. Maybe today. It's an option. To take it on the quotation, whether you want to order it or not.

6:44

From our point of view, it's definitely a requirement.

6:48

If we go back, some, say, 30, 40 years, remembering, printing industry, when I started, my career, many machines didn't have index Unix systems in the printing industries.

7:03

Nowadays, this has become a standard. No one talks about it anymore.

7:09

It's just included in the machines.

7:11

We see this mixture some extrusion industry, kind of a tendency or a trend for the same same development in Denmark.

7:23

Um, today you have cleaning issues when you do manual cleaning.

7:29

As we all know, access to the machines is very, very limited.

7:34

When you clean manually, the results are very uneven. It really depends on the, let's say, on the tenant and the engagement of the operators.

7:44

Uh, It may cause you to have to stop the production to stop the line because access to to the running through rules is either very difficult or dangerous or both.

8:00

So, as there's always the danger of injuries and accidents when you work in such machines, Also, operators have to use hazardous liquids, strong solvents, which are stored mixed with the machines and don't have to touch it with their hands. All these kind of things.

8:23

So, there are definitely issues when you want to clean menu.

8:28

Um, so the outcome of all this, the quality drops.

8:35

Um, you have impact on the film by residual smoothing up on the rolls.

8:42

Your productivity, probably it will decrease, as you may have to stop the machine.

8:50

You have to restart the machine, restarting.

8:53

The machine always causes some kind of waste, until you are back in those stable situation.

9:00

Um, why it's doing this, starting and re ramping, The time is running, clock is ticking, so you're losing time over the production date and, of course, the more you have to restart the machine to keep it warm or keep it hot.

9:21

The energy consumption is growing.

9:26

Now, the solution.

9:27

our answer to all this will be what we call our hands off system.

9:34

The goal is to clean the true role once you're in production.

9:38

So trying to avoid machine stops, do everything automatically, which is some kind of groundbreaking.

9:47

In respect of extrusion loins didn't exist before, um, we will bring a certain flexibility. And installation, So the system is quite modular.

10:01

And we can, we can build up in different configurations to suits the machine geometry.

10:08

And it can be used for both areas, primarily taking your foods, and also food create films.

10:16

We come later to two more details to show you more of what we are talking about here.

10:23

And then I will hand it back to Christina and also to Alexander and talk to you later. Thank you.

10:41

Thank you, Maria, and hello, everybody.

10:45

This is Alexander: I'm the Product manager at ....

10:50

The slide here I show you summarize the main topics of ... Index two.

10:57

We all know that the corona treatment require footprinting laminating by the way it should be done in the extruded lot.

11:07

It's because the treatment in converting line OB is not sufficient.

11:12

The treatment is the lab itself. It's both a refreshment, go on working.

11:21

The treatment, exclusion live gives all sorts of rhythm in logistic levy at the aging of the slope.

11:29

So there is less time pressure in transportation at what reason did enroll.

11:37

The third point is it is not very well known today.

11:42

It is the possibility of live coding in the sheet and cause the exclusion to pay at the pump or early.

11:51

In the second part of the webinar, I will talk about these topics in more detail.

11:57

Now, we will use those results leading short summary of our webinar.

12:08

On this slide, you'll see the three types of it through extrusion we are talking today, is the cost then, Google, and lower than that.

12:20

Next slide is the casting extrusion is extruded through a nozzle to cooling rolls.

12:30

The rapid cooling lead to a highly transparent with fully enrolled, bought the regular gaming.

12:38

The cleaning process can be automatically, or by all, within a system, which saves a lot of downtime money further down mostly directly before the windings are now treated situated.

12:53

This E three must be very robust tied to the global, the IASB at the top.

13:02

The easy access and service of our unit, maximize uptime and productivity.

13:09

Next slide, please.

13:12

Here is the sheet excludes until it looks very similar, but speed and working with much smaller, the savings and benefits of an automatic throw cleaning of the same as cost, too.

13:29

For the treatment looked a bit different.

13:33

It is only required to do inline or down three block coding.

13:39

This ... done by a spray system, did a drawing.

13:44

Compared to the data, not the bet, This process has a lot of benefits that did show later.

13:55

The low, the next to the old biggest volume of produce lasting live, the carotid artery, that the lower line, specially designed for the requirement of the lower the cubes.

14:09

The three, the of that statement type electrode, Easy and Safe Access to Text Segments, is here, edgehill and inquiry.

14:23

At this point, I close the basics of a group that looked at the data.

14:31

Thank you so much, both Alex and Matures for this introduction into the plastic film extrusion Business. And now we will let us know a little bit more on who we have on this call. So we encourage you to engage with us in the poll that we're going to do. We're going to do three today. You use your mouse to click on the radio button of your choice.

14:47

And it's a way for us to see who we have in your thoughts in this industry. So I'm not sure in the poll on the screen right now. And so you can see that on an average, what percentage percentage of your finished film is discarded due to defects is less than 1%.

15:04

It's a one to 4%. Is it five to 8%, or more than 8%? And I see some very interesting numbers coming in that 25% of you have voted a very clear winner for one of the choices. I'm gonna give it a little bit more time use, the radio button or the two, they click on the other defects of your choice, or how it how much you have effects on your choice that are discarded. So on average, what percentage of your finished wellness has started due to defects?

15:32

Less than 1%.

15:34

one to 4%.

15:36

five to 8%.

15:38

Well, more than 8%.

15:41

I have 36% of you that have voted. I want to hope to get a little bit more. Yes, thank you. Good, I'm getting some changes.

15:48

The results are wonderful, hoping for a little bit more results to pick up the radio button of your choice.

15:56

Less than 1%. one to 4%, five to 8%, or more than 8%. All right? So I'm going to close the results and I'm gonna share the results with you.

16:05

So this is what you said, 64% of you, and that's what I saw, quite a few, It was actually higher number four to 64% of you are women, the one to 5%. 18% of you have more than 8%.

16:19

And when it says that nine is less than 1%, and then 9% is less than 5 to 8 or 5 to 8%. So that was very interesting to see. So, I'm going to hide the results of the poll, and now, I'm going to turn over the presentation to my T S, I'm changing the percent over to you.

16:45

Now, we will talk about surface caning, of the options that you have there, Perfect.

16:50

OK, thank you, Christina.

16:53

Um, we'll come back to, to Mike part of this presentation.

17:00

I hope that you can see presentation, I hope that everything is OK from the picture.

17:08

Yes, it looks wonderful, thank you much.

17:10

OK, very good, just double checking, to be certain, OK, now, the topic is Surface Cleaning of two Rows.

17:21

The name of our product is Film Cylinder Cleaner, FCC, as we use it as an abbreviation, so maybe you want to keep this in mind.

17:31

I hope you will hear this more often in the future.

17:35

The FCC is combined with what we call the fuel tax. Actually.

17:39

The film pack is the kiosks, which we are using to help teaming.

17:47

It's also supplied by bolden.

17:50

So how does cleaning look today?

17:55

I do have a little problem here. It was changing my slides.

18:01

Sorry.

18:02

It was a hiccup.

18:07

There we go.

18:08

Um, so today, if you look on the left hand picture, today, you may know such kinds of situations where operators have to go through a manual cleaning process.

18:22

So they use all kinds of tools which to have a side of the machines, whether this is a piece of towel or tissue, or a kiosk, or something like a self-made broome with it with a piece of cloth.

18:39

In any case, this doesn't look at all like a professional manner.

18:44

And it will create all kinds of issues.

18:48

And on top of it, it's always dangerous for the operators, too, to go to the machines, or to climbed into the machines, or onto the machines for cleaning.

19:00

Now, the ultimate solution is what you see on the right-hand side.

19:06

It's an install involving system FCC, on a so-called cost line, about three meter wide.

19:15

Everything is completely automatic.

19:19

All the operators have to do is simply pushing a button.

19:24

And over the next couple of minutes, we're going to discuss with you, or show you what options we can offer it, and how it doesn't work in detail.

19:36

Now giving you an overview, what's it all about a smart automatic tuning of Cheerios and or castros.

19:45

We call this cleaning on the go.

19:49

Why? Why on the go? Because the operators, they do have to do other tasks on the machine during the production.

19:58

So whenever they feel that cleaning is required on the job roles, they simply push the button on the go, and they can concentrate on other things.

20:10

There's no manual cleaning, any more required.

20:14

It eliminates the health and safety risks.

20:19

There is no operator who has to go back to the general rules anymore.

20:22

No hot surfaces. For the operator anymore, Know-nothing points, no dangerous situations.

20:30

Um, the system will also help to prevent quality issues before they may even, or curve, Simply because, today, the operators, they don't like cleaning because they have to work in awkward positions around the machine.

20:48

So, they may extend the time of the ending of the period of cleaning, the answer they really have to do for you.

20:55

Now, they have some kind of, you know, a comfortable situation, was the goal of an FCC by simply pushing the button.

21:04

Um, we don't have to stop the machine anymore for cleaning.

21:08

So product for stopping the production or interrupting the production for cleaning is normally not a requirement anymore.

21:19

So if you don't stop the machine for cleaning, you don't have all the waste anymore for, for restarting the machine all the work you have to do during, during ramping up machine.

21:32

It does not exist unequal.

21:35

And on top of it, the close we are using is made of a very smooth, microfiber material, which is there's no limit to off the shelf. It's especially designed and adapted to the cleaning cycle.

21:54

And it ensures efficient cleaning.

21:57

And especially for surfaces, on sheet lines, where we have mirror, polished surface qualities, it gives a high level of protection of these surfaces.

22:10

So the benefits to summarize.

22:14

food quantity will enhance the and stabilize over over the whole production time.

22:23

Your productivity most likely will go up.

22:27

No stops anymore, for cleaning.

22:31

It's completely safe for the operators.

22:34

They don't have to walk into the machine anymore.

22:38

Cleaning is efficient. Also, because we are trying to clean, as wide as possible, It was, was at one go.

22:47

I'll wash cross can be as wide as up to 2.5, or three meters.

22:53

We also provide adapted and tailor made solutions depending on the application in US specific machines.

23:02

We have now gained a lot of experience with different geometries and different roles sticks.

23:14

Now, let us have a look into sheet lines, Um, as Alexander earlier introduced, also here, the goal is to have minimum interruption Foot for cleaning, seal the top picture.

23:35

This is more kind of a marketing snapshot. you see that we have to Wash Faso.

23:41

clean your hands as we call them.

23:44

This is a typical application for sheet lines.

23:48

On the bottom, you see a picture which has been grabbed from a real installation, has been a little bit fine tuned for this presentation here, but it's a rave installation.

23:59

And most of our customers are running sheep loins.

24:04

And approximately half of these customers are using, do, cleaning has in one line. So, usually, this is the.

24:12

these are the first 2, 2 rolls, right next to the die.

24:18

Next scene, roll number one and row number two.

24:22

Again, the system is, is, is completely automatic. Go optimize your quality.

24:30

Stabilize your output and productivity.

24:34

As mentioned before, the idea is to have a cleaning system in one touch.

24:43

Our system is not a traversing cleaning system.

24:47

There are suppliers out there in the market to supply tiny little cleaning parents who are traversing across the two roles.

24:56

We don't use that principle.

24:59

Assets will create what the Americans call a lollipop effect, which is eight helix going around the show Rose which will then be, let's say, transferred into the film.

25:11

You will see the see the traces of the lollipop effect in the film.

25:19

Very often, we get the question, so, how does the cleaning cycle work?

25:24

You work, according to your needs.

25:25

So, there is no no fixed cleaning cycle from our sites, or any given, in terms of how long it will take, how intense the program will be.

25:37

That's all adapted to your process during permission.

25:46

In ..., the goal is very similar.

25:51

However, we do have different challenges due to the, let's say, geometry of these machines.

25:59

Uh, caste lines have a tendency to be very big and very wide.

26:05

Uh, there can be cast lines where the widths of up to 3.5, four meters. I have heard about machines, even even five meters, six meters.

26:16

So this is getting bigger and bigger. Also, the diameters of the chill rose.

26:23

much different from sheet lines.

26:25

So, we have to find different applications.

26:28

On the bottom picture, you see that we have arrayed here to to to kind of transport, exceeding it into the right position.

26:40

Overall, the goal is quite similar to sheet lines.

26:45

Um, trying to prevent scratches on the surface.

26:51

On caste lines, this is maybe an easier task task.

26:53

Because the surface of the sculpture rose, is very often kind of rough or cremated compared to sheet lines.

27:03

again, no menu tuning.

27:05

You can imagine when you have a 3 or 4 meter wide machine, how awkward it is to clean such a role manually.

27:17

Now how long it may take?

27:20

Um, also, again, quality issues can be prevented because it's fairly easy to start exclaiming cycle.

27:33

The operator can do this whenever he feels that the children requires a tree.

27:39

Again, we don't have to stop the machine.

27:42

And by not stopping the machine, we can reduce waste due to the downtime.

27:54

Now some more words about the microfiber training course.

27:59

There are basically two main tasks, such a close as to fulfill.

28:06

The one is of course, absorbing dirt in fluids, from the surface of the channel.

28:15

Now the microfiber cloth as has two good features here.

28:20

On the one side, it is very soft from from, let's say from it, from its surface.

28:28

So it will also protect the surface of the material, and on the other side, due to the way it's produced, it has a high level of ability to absorb the fields between between the fibers of the cloth.

28:44

ah.

28:45

In addition to that, such a close has to come with a high level of me. Let us say mechanical carrick characteristics.

28:56

Think about that. we have to avoid the closest breaking when we are in a feeding cycle.

29:03

The clock must not shrink.

29:06

Um, and similar things.

29:09

So this is not a loss, let's say, from the shelf. It has been especially developed and adapted to our needs.

29:20

Now many customers are asking about, you know, drop consumption, and we say, here, in our slides, it's a low cost consumption.

29:30

No, what means low, or low, is always a comparison to what.

29:35

What we can say is that we see around about 65 exceeding, hence, we have so far installed, get the majority of the customers, is changing the cloth approximately every 3 to 4 weeks.

29:50

That is a little bit, depending on the way you operate the machine, the way dirt is building up on your machine, on your poly mer, on your raw materials Maybe on the temperature of the .... All kinds of parameters playing.

30:09

Into the game yet?

30:12

But take it away, as an average 3 to four weeks to change one rule.

30:20

Now, how does the system operate?

30:23

Um, besides the cleaning of the machine, we have a so-called control and supplying Cabinet, which is installed near the machine.

30:33

Um, Cleaning solon is automatically those still being fed into the cleaning ads.

30:42

We have to do this on a high precision level.

30:46

You have to imagine that that the amount of liquids is very, very small we have we're not flooding the machine, which was liquid.

30:57

We talk about 20 13 liters per meter width per injection.

31:05

So, for our total cleaning cycle, we talk maybe hundred, 250, maybe sometimes 200 meters, so It's It's not a lot. what we are using.

31:14

It's probably less than, than what menu operators will do for the menu cleaning.

31:22

Also, the touching off the surface is done in a very tangible way.

31:27

Um, we call this Kiss Touch.

31:30

Um, contrary to what we do in the printing industry, where we have a slight over pressure onto the cylinder, we tried to avoid this. Here actually is only a single layer of cloth.

31:43

Um, touching the tool.

31:47

And, again, we do not do any traversing during the cleaning.

31:53

Trying to avoid are not trying it Should we do? We do avoid the Lollipop effect.

31:59

Compare two systems with a small, tiny seeming it traversing across the rule.

32:07

And by doing this, traces and deposits and residuals sitting on the cylinder and having been, let's say, chemically due to the results, will be taken into the close.

32:24

Part of the residuals will go away with the film film on a substrate whether it's a plastic or or paperwork.

32:33

It's always part of the Phoenix.

32:39

Now, for the Operator. It's, it's, it's, it's pretty easy. Even. Myself, I am, I am able to, to operate this.

32:48

Whereas I'm not the best: you know, Operator on the machine, to be honest.

32:53

Actually, what you see here is also what the operator will see.

32:59

The settings and everything in the programming is done in the background.

33:03

The operators don't have to worry about.

33:06

Everything they have to do is to select a program, 1, 2, 3, 4, 5, whatever, and to hit the Start button, The rest is done automatically by the system.

33:18

Whether you're selecting a short program, a long program, intense program, or less intense program, in terms of how much liquidities he's, he wants to see Phoenix Cycle.

33:31

That's old storage in the background. So it's fairly easy to operate.

33:35

Um, the programs for the cleaning cycle himself that's that will be set up during commissioning, so no worries about that.

33:46

And, if needed, we have different levels of integration.

33:52

We can come up, come come up with simple IO interfaces.

33:58

If you like up to high level serial integration into OEM control systems, using things like Profit Net Profit Boss, essentially.

34:15

Um, is it easy and fast to service and to maintain? I would say yes.

34:22

Um, it's not maintenance free, but there's, there's little work to do on on the system.

34:29

We have taken here an example of what we mean with was fast and easy service. If you imagine, you have a 3 or 4 meter wide cast extrusion line.

34:40

And then do you want to have access to the to the cleaning it, for example, to change the cloth um, then it's very difficult to have access to the teaming, and so what we're actually doing is we are using a traversing room and we can, actually move the cleaning head out of the machine.

35:00

So that operators have access from the outside.

35:04

Um, that's normally, uh, very, very, easy, a very good solution.

35:11

There are other ideas possible.

35:13

Overall, as I said to, the maintenance workers is, It's not zero, but there's not not work to do on such and such friends. Some kind of assistance.

35:27

Again, we're trying go.

35:31

Our goal is to avoid menu Cleaning and then we do this with with an almost maintenance free low maintenance system.

35:44

Now there comes always the question.

35:49

About the Roi I don't really call it our eye because our eyes always take much more parameters into account Does that say hey, we can calculate something like a payment payback period?

36:06

The equation here, the approach, is quite easy, as we don't know, always in detail what's what's here.

36:15

You're overhead on the machine. What's, what's the hourly rate for the operators?

36:20

What's demanding on the machine?

36:21

How many people have to work on the machine, maybe by union regulations, etcetera?

36:28

Um, what's the hourly rate of a machine itself?

36:32

What's the price or the cost for, for your raw materials, for your polymer for you additives?

36:38

So, what we can say as a summary, is, if you work for an example, 250 days per year, and we can save something like an hour for a day, uh, we can increase productivity around 250 hours per hour per year.

36:59

What customers are telling us, today, that manually cleaning, depending on your machine and on the configuration, takes 30 minutes, 90 minutes.

37:09

We have some customers say, they actually clean 3, 4 hours per day, but we have not put them here on the slide because it's maybe an extreme.

37:19

What we don't know is, how many liquids are the operators using of their of their strong solvents?

37:26

We don't know this.

37:28

Maybe, you as a customer, you can calculate this, um, on your own, and, now, we have to compare this with the automatic cleaning.

37:40

The average time or feeding cycle is somewhere, 1.5 to 2 minutes.

37:48

Some customers are running one minute cleaning cycles some maybe a little bit longer.

37:53

It depends on the process and we're trying to use as as less as our own solvent as possible.

38:03

Hundred hundred 50 maybe it goes up to 200 liters per cleaning cycle.

38:09

So, these two situations have to be compared man, you're exceeding automatic, cleaning There might be an equation.

38:22

Good savings in consumables, etcetera, are not that big.

38:26

I think the main focus is is to increase your, your, your production time, your productivity, and what we should not forget.

38:37

And that's about 50% of the decision, or the reason why, why, people decide for our system is, is safety on this machine, especially when unfortunate situation have occurred on such machines.

38:57

Now, to wrap this up, we have here a statement, one of our customers.

39:04

He's using the system now for almost five years now.

39:11

So actually, It's a nice statement. Why, because he, he, he's actually summarizing what I just explained over the last 10, 10 or 12 slides.

39:23

So he calls the reliable system, Maintenance is fairly easy.

39:29

He is satisfied because the system simply is doing what what it's supposed to do.

39:37

It's helping stabilizing these quality.

39:40

Cleaning efficiency is high, and it's increasing its output.

39:45

Also, saving waste by not having to ramp up the machine anymore.

39:51

And what's not mentioned here, this customize is running metal ... films in the Second step of process.

40:00

And he is saying that the metal rising process has also stabilized, and he, he would not be able anymore two to run its mentalizing production without a cleaning system.

40:16

So, this is a nice statement that it combines all all nice features of the system, which actually brings me to the end of my part.

40:27

I do thank you very much for, for your attention, I hope it was of interest to you, and that you can take somebody information away from this today's webinar.

40:40

And we will be more than happy to discuss your project in person with you, or why you do course whatsoever.

40:51

Thank you again for your attention.

40:54

Stay safe.

40:56

And then I will hand over back to Christina, and I think something thank you very much for your time.

41:03

Thank you so much my test. So, now, we would like to hear from you here on this call, how you are doing training today? Because this is extremely interesting for us, particularly in our situation. So, how are you doing today? Use your radio button, click on the radio update of your choice, isn't notating? Is a manual cleaning? Is an automated cleaning with a valid solution? I said automated cleaning with a competitor solution.

41:27

So, again, how are you Caning today, no painting, manual cleaning, automated heating with a balanced solution, Automated cleaning with a competitor selection?

41:38

And we did have the session earlier today, which showed the exactly. The similar as a phone says, as you are shown here today. And we have a close to almost 50%, I'm going to close the votes, because it's very clear to share with you.

41:50

So, 70% of you do manual cleaning, 18% of you have an automated cleaning from competitors solution. 9% of you do automated cleaning with Vomits Nation, and 0% of you that voted said, no.

42:05

So that's very interesting for us to say.

42:07

So I'm going to change over the Career Center now over to Alex, so that he can continue with our Surface treatment presentation today.

42:16

Alex, the floor is yours.

42:19

Thank you, Christina, and hello again. I like the product of the Opera.

42:25

I will guide you as a vegan, committed to the goal that treatment is true.

42:31

We need to see your screen, Bill Gates.

42:41

Well, thank you.

42:42

Yes. Thank you.

42:44

OK, very good.

42:46

Now, here on the first slide, you'll see all the details of eyes, glowing light of God.

42:53

The violet light is emitted by the air plasma in touch.

42:59

Now, let us first take a look what did through the chat.

43:04

Physically, Corona is simply the app that's generated the NBN pressure.

43:10

And last, but it's just the gaseous mixture of iron electrode. Not possible.

43:17

Generate a plasma electrons to be disruptive from the Google Get articles.

43:23

And possess certain energy is required.

43:28

The energy input can be done, but if replaced by radiation or heat, in case of the daughter, Teresa, this is done by an electric charge.

43:40

The working principle is shown here in the graphic on the right side.

43:45

I voltage electrode placed in small distance.

43:49

Look around at the electrode, which is on the side of the road.

43:55

The system contains at least one elective barrier like its atomic or political.

44:01

The barrier can be the role of the high voltage electrode or both.

44:07

That's why it is called BDD Die Electric Battery at that.

44:14

Also, do we believe that the right question belt with high velocity of the electron beam to get electrode, roller, plasma camera?

44:26

Even now died over that are all true.

44:30

The top side of two guides, I believe what you believe, so, all you leaders who didn't like NLP and so on, OK.

44:45

The electrodes can be made of that, will object.

44:49

Lot of adults take a unit like that want to show both aliyah.

44:56

The barrier at the tickets, we show both the year the highest speed tufted.

45:04

The building lead. Role.

45:11

And clear up with you.

45:14

Right.

45:16

General rule, the higher the Hangout electrode because the size of the electrode.

45:26

Hmm.

45:29

This graphic explains book.

45:33

Of both the electoral bouncing with the high surface is both the eve of the chain either the impact of the electrode, electron density of all the belongings show, the resulting both highly reactive and react.

46:05

Awesome.

46:06

This broke them down oxygen on earth.

46:12

Awesome, awesome.

46:18

Which improves?

46:20

Oh.

46:22

The Bible result in this tree illustrated results, OK? That's not weird.

46:32

Very good to pave the way.

46:36

These are the three shots.

46:45

The effect of the throne will be on, our lives.

46:52

Very helpful for you, as well.

46:57

Book list of all the roadmap you don't need to.

47:06

MS.

47:07

Yeah.

47:08

The higher the bill, I was OK.

47:13

We also see that the required output.

47:18

Iowa.

47:22

Pardon?

47:24

What is not seen? Is that the surface tension at this time.

47:29

We're rapidly already a few days that will be tried again, though, it is not that these three.

47:41

Refresh. Yeah.

47:46

Oh, yeah, it's also not sufficient to you are working only with you AG.

47:56

Though, within his lifetime, But then, that's one theory that live lay the groundwork.

48:07

Now, let's look into loans.

48:10

With X two, the majority of the proto treated the tape.

48:17

Treat both diets of the two.

48:22

More cases inside you also treated because it's the two separate width, OK?

48:33

No, one sided, right.

48:38

The blue side of the road, we play long line allowing deaths for both sides.

48:47

Food rises.

48:52

To all of the blue line Mitchell said to be re-iterate every time they.

49:03

The reason because this is the Florida book written thing.

49:07

That's bad feeling.

49:12

To overcome this problem in real life.

49:18

Nicknames.

49:20

Aye.

49:21

Electro by flipping the segment who are not, who will listen The FAFSA form.

49:28

Without truth.

49:31

Ethnic on that area and very often it will be really oh the team decides to provide was the arrival of the devil we'll see.

49:47

All right, yes.

49:51

On this slide, the benefits of W I's.

49:58

Ben?

50:00

Up to 18 slides providing treatment, all I want to eat, like opening allows, up to what reading will large, flat doors.

50:18

OK?

50:20

They're all about allowing it, OK?

50:25

They become slaves silicon.

50:28

It's nice, three. Will you need the Larry?

50:36

All of the above.

50:40

Each of those side, very high, kuroda, in cafes that are very different glow, speed lines are also low.

51:00

The high speed, the working with so much out of it.

51:07

Decide to sample a much bigger look robots.

51:12

Modeled with draw me somewhere on Rwanda, the electro thermal bath, the right hand side equal, right, You make jokes.

51:29

For all of us, we will allow him, but you will typically also behind the electrode, that's the way the electrode profile wall with robust isolated then, the patient, our patients.

51:55

Grown up to X L replied when asked the way, the design allows the width, but neither electrode, you building housing or promote the book leaving behind the electrode will. Not be.

52:22

Also separate, Next.

52:27

Only, though, all together, our highly generated, we will save.

52:41

True.

52:44

Belle is the last thing.

52:48

In it, this can be done live, stuff based on the down the road.

52:57

Most easy. But I love it.

53:07

The working principle is shown here on the slide.

53:12

Ooh, ooh.

53:15

And it said though, that the end of liquid races.

53:23

Followed by row, OK.

53:28

Try bye.

53:34

Typical example of a show you will see off of boating.

53:43

The other.

53:47

Yes.

53:48

The other picture shows us a little bit on the trade batteries.

53:54

What is new?

53:57

That's the right would be what bits.

54:01

They wrote a book off The Pitch Battery only.

54:10

I wrote this as well.

54:15

In these slides and liquidations, summarize at two.

54:23

Laugh at that effect, if throughout the delay, it will be prompted with the 14 days to write.

54:33

So sometimes I have told you, we said, Well, we will permit, in any case, the export trials.

54:46

Edit it.

54:47

Meeting with everything, and, indeed, insights.

54:53

The ethics of coding.

54:55

All these limitations affect the diversity of the protein.

55:02

The red wire, low.

55:05

It allows a travel site need trust.

55:12

Now let's look deeper into protests.

55:17

The bulk liquid always, always buy the liquid.

55:24

Those are the key.

55:26

Those are a lot of places.

55:30

The ideal, if the relevant content of the patient, it's easy to upload, Goes on to emphasize that.

55:48

Oh. Yeah. Yeah.

55:53

Very low workload.

55:59

The liquid water phase to the load is W B.

56:02

Easy to write row.

56:05

Now looks nice.

56:07

Cool.

56:10

This is the relation we will be looking for.

56:18

Viable niche Birth Relation, Worldwide, as they are why the Violet Bob is the role of the system that was already installed, that has been added up.

56:35

And guided.

56:39

Yep.

56:40

Owed by looking rope, to do with it.

56:46

I try it.

56:49

After the dry out, the Bible Belt will get through life.

56:54

The product, what do you want to trade?

56:59

I showed, stopped the lights.

57:07

The products, the routine, right?

57:10

Show you, the light, be working with all up, that's why the team size, what are people?

57:21

It's done here with only two electrodes.

57:25

The great buildings that installed, really low level, a move that we wrote.

57:36

Sept liquid coating, both Babel problem and feeds, is it work?

57:44

Yeah, dog.

57:47

Oh, yes, to date.

57:52

This last slide, I will give you an idea of benefits, then the baby boom, great, totally worthless.

58:01

The other is data that blew up the building, typical, EG, via your book coating, F of E Very good one. But do that.

58:19

This, lots of edge, this is approximately 4.5, beat me through.

58:29

if you really want the production of textile this days five, so you little skeptical here, Now I expect everybody listening.

58:46

And laugh.

58:48

Thank you so much Alex, I think is very interesting presentation and as some of you have noticed, we've had some audio issues today. So if you would like to have a transcript of what we presented today, please let us know in a survey as well that do that for you. But let me launch the third pole, because we're interested to see what you thought was most interesting to learn about. today is the solutions presented today. What would you like to learn more about? What do you think was most interesting was that the automated cleaning represented the fence and a cleaner cleaning consumables, where we show that the unpack, it wasn't blown film extrusion. The way we show that All Bank Current Extrude, was a cast film. Extrusion was presented at all brand current Up. Your Excel, or inline and default coating, were presented the all brand rotor spray. And you can check anything that you want to check all that apply.

59:39

So automated cleaning consumables, and blown film extrusion cast film extrusion, inline empty extrusion. And I see a lot of you have voted. And I see here as well, that it says, that you can only select one. And so it may be that you only have the option to choose one, instead of several, even though that was what we intended to do, so I apologize for that. That means that I'm going to close of all, I'm going to share what we have here on the screen. So for that reason, maybe, that was never had a 70% percent of you said, that counseling to cleaner, that, that was an automated cleaning. And then 20% of you talked about that, all of our current extra Excel to pass them extrusion, and then 10%. All right, so I'm going to change the presenter over to myself and give you some final slides here as well, so you can see on the screen now.

1:00:30

And my screen is right now, completely blank.

1:00:33

Oh, I hope that you can see my screen.

1:00:43

Alex and ..., can you see my screen?

1:00:46

Not known.

1:00:48

All right, so that means that we have lost the visuals of my screen, and I cannot share over to that. But I wanted to share with you, is everyone that's here on the call that we have are a number of different plastic film. Extrusion is legislation as well, as well as the 40 plus Painting and 90 Plus surface treatment systems installed globally. And we present it for you, today, some information when it comes to how to deliver automation productivity film, extrusion, where the four main pillars Safety, Efficiency, Energy, Consumption Inequality.

1:01:17

I went through the three types of applications and went into depth about surface cleaning and surface treatment, and that we can now see that right here on the screen right now, as I'm seeing the audience view in your handouts, you have a presentation from today. They are also have links to where we have more webinars that you can attend to, As well as a quick links to where you can learn more about our different tracks when it comes to both the films and cleaning, the old brand products, Interesting videos, both a cleaning and surface treatment and some collateral. So I urge you to pick this up.

1:01:51

And so I got to, I know exactly what went wrong.

1:01:55

Thank you so much for I, one of my colleagues.

1:01:57

You can, right now, you can see parts of my screen and because it was frozen in Nepal. All right.

1:02:08

So I would like now to go over to our Q&A section. May recede a quick things. I want to show I'm going to flip a few slides earlier so you can just see the installation slide.

1:02:20

Here you go. So this is what I told you about where we are in the wild. And I think this is important to see. These are permanent technologies, both antic teaming and surface treatment.

1:02:29

Alright, so that brings us over to the Q&A, and we're received quite a few questions throughout the session today, so I want to have both Alex ..., yes?

1:02:41

We're now good.

1:02:42

So let's start off with, some we have on key name, OK. So how long does the cluster all last before it needs to be exchanged, and how long does it take to exchange. And where do I get new roles.

1:02:57

Number of questions there for you, but yes, OK. I tried to memorize these three questions.

1:03:03

So, so as we said in the presentation to the average time to change, such a thrill thrilled is every 3 to 4 weeks. There are some customers who have to change maybe after 2.5 weeks.

1:03:17

Some are even changing after a longer time.

1:03:21

five weeks.

1:03:22

Um, changing the clothes itself is fairly easy.

1:03:29

Provided, you have to clean and you have in front of you, it may take, once you have, you have learned and trained how to do it.

1:03:40

You talk about two minutes, three minutes, approximately.

1:03:44

And the replacement roles you get from from our consumables Department.

1:03:52

So you can you can get this directly from Bolt.

1:03:56

Perfect, You answer all the questions that were, they are actually. Yeah. Then I have something for you. Alex. Is there anywhere that I where I can run trials?

1:04:10

Yes. Of course, we have a very good eclipse.

1:04:17

The Technical Lead, here, with the wind up.

1:04:20

We can the test booking near very close to.

1:04:29

Or adapt to the quotations.

1:04:31

Uh, go to bill.

1:04:34

Though we can make the leap year, but they also can test three blow them off them, check the Earth. Wyeth.

1:04:50

Thank you so much Alex. And I have one more for you more specifically about Tableau kind of extrusion. So are there also blown film carona without segments?

1:05:02

Yes.

1:05:04

Of course, it depends on the requirement of the user, Aye by Seal was estimated that they study the end of our load lines.

1:05:21

Bob oxide electrode.

1:05:27

Thank you so much. And I see that we have almost everyone on this call, even though that we're over the hour, so we'll continue with some questions, because we have quite a few that come in. So I'm going to turn it over now to mature.

1:05:37

Is it possible to integrate the software and controls of your system with our plant data and OEM controls?

1:05:46

Yes, Hamo, from a technical point of view, it's it's it's possible.

1:05:53

We do have the skills for that, and we do have the Software Department actually, to do this.

1:05:59

Normally, we do this when we talk about new machines going into the market so we can talk directly to the OEM, uh, doing a full integration on an existing machine.

1:06:13

Yes. It's possible. But it usually, it comes with a high level of, say, efforts in time and costs, so this has to be discussed specifically. But yes, we can do this.

1:06:29

And how will your system get damage in a film jam?

1:06:35

Um, not yet. Luckily. this is a very common question.

1:06:42

And we normally overcome this in the NFL's discussion with the customer, to use, explaining to us what exactly can happen on this machine?

1:06:54

And whether material chairmans building up, which conditions, and we can prepare our system 2 to two such situations, for example, to, to install retracting mechanism, as we call it.

1:07:12

two, to pull back the cleaning at a certain distance from the surface of the tool.

1:07:18

So that material can, can travel on an ....

1:07:22

So there are possibilities, too, to overcome this.

1:07:27

Thank you. And can the system be used if I change film thickness?

1:07:35

Yes, within the normal range of film thickness, there should not be a problem.

1:07:41

Usually the sequence changes from, for example, 200 microns to maybe 1100 microns. So that does not typically disturb it seen.

1:07:56

Thank you, Angela, to go over to Alex.

1:08:01

Well, let me see here.

1:08:02

So, where do you produce your products, and how do you ensure timely delivery around the world?

1:08:12

We produce only in love with it.

1:08:16

It's a very close to practice to read from here.

1:08:20

We deliver worldwide the product by afraid or by faith. Right?

1:08:27

Uh, our bad pops also deliver from here.

1:08:33

But we had also bath stations around the world too.

1:08:38

Guarantee it saw the delivery.

1:08:44

And, then I have one final question, OK. I see a few people that have to drop off, so, ..., then Word.

1:08:53

So, how, what is a typical delivery time? And how long does an installation take?

1:09:01

Typically, nowadays, we talk about, let's say, between 3 and 4 months, for the delivery time, that, that includes all kinds of tech, legal, clarification, engineering, etcetera.

1:09:16

And an installation, it depends how complex the system is, when it's fairly simple, only.

1:09:23

Once you get, we may do it within a day, 1.5 days, If it's more complex with a rail, or maybe two tubes eating habits, et cetera, three days, four days.

1:09:36

So, I wouldn't go beyond one week or 5, 5 working days.

1:09:42

Let's, Let's see, the average.

1:09:47

Thank you, for that good answer. And so, you have been here. Or do you know that there are some more questions that you have that we haven't been able to touch base on? So one option is that you fill in the survey form. We have your questions that you've written into the question pane. We have those recorded. The other option is that you have more questions to close out in the survey that you'll just see. At other third option is that you have are websites, where you can go to find more information, both ... dot com and ... dot com. And we have an excellent opportunity with a 24, 7 online chat, where you can get in contact with anyone of us as well. So that's also very nice. And so, with that, we are on that note. We wish you a great remainder of the day, and we hope to see you again soon. And stay safe and many, many times, and many, many thanks for your time today. Goodbye everyone, and have a great day.