Crack Injection episode #012 Q&A 1st Webinar

Concrete Injection Made Easy

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SUMMARY KEYWORDS

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SPEAKERS

Mateusz Furs, Webinar participants

Mateusz Furs 00:03
Hello, my name is Mateusz Furs and I welcome you in the 12th episode of the Concrete Injection Made Easy podcast.

Mateusz Furs 00:20
It was my very first webinar yesterday, so I felt a little bit stressed and of course, not everything went exactly okay, but I'm happy about this event. Anyway, I answered some questions you have asked me from the last day of my podcast, I explained how we can save some time and money when drilling holes and how to consume less resin. I also showed a short movie to share why I use open packers and how these solutions helped me to take more control over the injection process.

Mateusz Furs 00:53
I also shared my idea for training and affiliation in our industry.

Mateusz Furs 01:00
So make sure you hit subscribe on iTunes if you haven't already and sit back listening. This is the 12th episode of Concrete injection made easy.

Mateusz Furs 01:10
Hello? Hello, hello. Hello. If everything is okay, there are some people already online. And I'm checking if it's recording. Yeah, I guess it's recording. So this is Mateusz from almost Warsaw, I live 15 kilometers away from Warsaw, Poland. And thank you for being here. This is my absolute first one online webinar. So please excuse everything if anything goes wrong. That's me!

Mateusz Furs 01:45

Well, the first things that are happening are the toughest one they say so well. I have produced and prepared a really quick presentation for you. And I would like to show this to you and then I will ask some questions during this presentation and I will show you the short movie and the movie is also like this movie is also a the answer to one of my one of these questions. And I hope that this movie really explains very well, what I'm talking about. So thank you for being here. This is absolutely first webinar from the concrete injection made easy launch time in May.

Mateusz Furs 02:41
My name is Mateusz Furs, I run Inblock, the service company. I started my business in 2013. And this year 2013 was still considered to be this tough time. The crisis time.

Mateusz Furs 03:00
So I thought to myself that if I managed to start my business in the crisis time, and then you know, the situation will improve, and I will be already on on market. So that was my idea. I really started. Before that I was laid off from my previous company. I spent there almost, two years, and I was their product manager for injections. And this made me this idea what injections is all about? I found it very interesting, fascinating. And yeah, that's that was my goal to be to start a business and do it on my on my own.

Mateusz Furs 03:44
This year, very special year and difficulty or stranger. I have like an idea to start a podcast because everyone was saying that you have to be online, right? And I mean, online business is growing. We buy things online, I booked this, this phone online as well. And I got it delivered to my home. So we do it all day, but our brand, our injection and construction brand is different. I mean, we don't we can't, we can't inject resin and the resin into the crack without really being there on site. But we can learn, we can really learn and exchange our knowledge online. Many companies many producers do it really all the time. So this is me. This is my company Inblock, and this is podcast. What I prepared for today is that the first I will answer some questions that you have been asking since the podcast launch. Then I will show you while answering this question I will show you this video compilation of why open packers give you a huge control over what you do on site. And then I will say how you will get your free copy of this core principles for effective crack injection. And if we have time, then I will also try if I know the answer, answer your questions. So, let's jump to the to the first question. Okay, so one of the first questions I got just after I started my podcast was why I really insist in you know, using Packers that are that the diameter of there is 10 millimeters, because there are still markets around the world. They use 14 millimeters, the diameter of the injection Packer is 14. That's the one the Armenian pucker, you can see in this picture. I have to say that when

Mateusz Furs 06:00
I started this business in 2014. And even earlier when I was working for my previous employer company,

Mateusz Furs 06:09
yeah, I have to admit that a 13 one three millimeter diameter, Packer was the standard one, everyone was using this. And we like if we say that we have to buy Packers, we meant we have to buy Packers of 14 millimeters now. But then when I started my own business, when I started to drill this holes in concrete on my own, I thought to myself that it's you know, it has to be something, I have to change it

because it really takes time to drill these holes of 14 millimeters. And you know, I was keeping rebars all the time. So I felt this

Mateusz Furs 07:00
strong need to drill smaller holes, drilled smaller holes, because I was hitting steel bars all the time. And I was really destroying the concrete all the time. So my first idea was, what if I start to drill smaller hole like 1010 millimeters and then I will only drill the part of the hole the first eight to 10 centimeters of diameter of 14 millimeters. And yeah, that was my first that was my first like, you know, overcoming information. Perhaps I can do it this way. Anyways, later when I realized that I have to first drill 10 millimeters like 50 holes, and then I have to change the drill bit and drill another 50 times to drill this eight centimeters.

Mateusz Furs 08:00
To be able to install the 30 millimeter Packer, I felt there's got to be something else. And so this needle of drilling small holes really made me to find another solution and the other solution is 10 millimeter diameter of parkour and what does it What does it give me so it gives me the ability to drill faster.

Mateusz Furs 08:26
I really drill faster, you know, when I use 10 millimeters instead of 14 and I know that some applicators even use the diameter of 1414 one four millimeters to install the 14 millimeter Packer. So this is insane right. So

Mateusz Furs 08:49
when I use smaller drill it it makes me easier to pass and avoid theory by reinforcements. They're hidden in the concrete.

Mateusz Furs 09:00
Or at least it makes less likely to hit it. And then of course, smaller drill bits are cheaper. So it's not only drilling faster but there are cheaper

Mateusz Furs 09:13
Yeah, so this is also the final finance advantage I destroyed this concrete and yeah, this is something

Mateusz Furs 09:26
perhaps it's you know, it's strange but if we are talking about the different volume that different drill bits are produced,

Mateusz Furs 09:38
then we can save some resin not only some time which is most important, but we can save some resin when we drilled smaller poles and I have prepared this Excel sheet I will try to just show it to you in the moment. Okay, that's it. So

Mateusz Furs 10:00
You should see this, this this Excel sheet were prepared. And I would like to compare three different diameters of 1014 and 14 millimeters and the length.

Mateusz Furs 10:16

Okay, so my average length of every single poll is around 27 centimeters. So on the basis of this, I can calculate the volume in liters. This is in liters, so of course, it's less than a liter. It's small one. But if we compare the volume

Mateusz Furs 10:37
of the whole of this drill, we're using different 10 millimeters. drill bit. It occurs that this hole is bigger than this one of 40 almost 41% This is huge, absolutely huge difference orders mean this difference is

Mateusz Furs 11:00
In our resin consumption, right, we use more resin to fill this hole even before we start to fail their crack, what if we drill using the drill bit of 14 millimeters? Well, the difference is even bigger, almost 50% difference it's I find it huge. I find it really huge. So if we say that one hole is this amount of resin, so 1000 calls is almost 15 litres of resin, almost 15 liters of resin to be bought and injected just to fill the and just to fill the hole. That difference in the difference in the volume between the holes of 10 and the whole 14. This is the difference. So

Mateusz Furs 12:00
1000 holes, what does it mean? If we are injecting the crack 1000 holes means around 125 meters of crack. If we say that we drill it with eight holes per one meter.

Mateusz Furs 12:16
If we inject into the structure of diaphragm wall, it means that Well, my average is around 25 holes per one square meter of this to inject into the, the structure of the wall. It's 14 squares. It's 40 scars, more or less. So coming back to my presentation, so this is the the difference and I really think that even though perhaps, you know 14 liters of resin is not that much. I really I still prefer to give this money to my kid. Rather than spending this

Mateusz Furs 13:00
losing money on unwanted loss, which is the consumption of resin. This is it. And we have to remember that the longer hole we drill, the bigger difference we produce. So if it's not 27 centimeters, but let's say 40 to 50 centimeters and holes, so the difference and the the bigger consumption of resin will be easier to really, you know, observe

Mateusz Furs 13:33
and last but not least, but maybe sounds funny but you know, smaller packers and smaller drill bits are, you know, are cheaper and perhaps lighter so it's they're easier to be carried carried on the on the job site. So this is my answer to the first question why I really insist of using the Packers of 10 millimeters instead of 14 on even or even bigger. But we have to admit that I'm talking about crack injection.

Mateusz Furs 14:04
Because crack is small. We don't have to deliver too much resin at one time. So

Mateusz Furs 14:13
it's really that's it. Another question, why do I buy and install Packers that are without nipples? Of course I buy nipples but I buy them separately. So I in install, attach nipples during the injection process, rather than, you know buying them attached already. So, if you take a look at this picture, you'll notice that all of the packers

Mateusz Furs 14:48
are without nibbles. And there is resin coming out of the packer from one of them. What does it mean? The resin is on The other side of this of this wall and I know it and I know it only because I use this kind of pucker without nipple. So, we can be removing the air from the crack we can remove the water from the crack or for from the expansion joint. This is the example of cortisone injection. This picture is taken two weeks ago in the area. I was preparing, I was making the curtained injection. And, yeah, I find it interesting to show you this. So, you know, using Packers without nipples also makes us to reduce the internal pressure into the structure. It's so important especially when it comes to you know, crack injection when we use rather higher pressure. Okay, The first one and one of the most important reasons is that we can really gain insight and we can understand what's really going on inside the structure we cannot see from it. We cannot, you know, scan it, we can only use our imagination, we can only understand what we do on a jobsite. But using open Packers really helps us to observe what is going on. We can monitor the flow of the resin and understand the degree to which the voice is being filled. And this is the moment I would like to show you the short movie, short movie I have prepared just for this occasion. This is the movie this is the compilation of some job sites of mine. And yeah, so let's do it. The movie is called that open Packers really give you control

Mateusz Furs 17:00
Control over what you do on your job site. So, this is the first one, this is the structural injection of the top slab, the top slab was around 25 to 30 centimeters, and it was leaking like from this punch, no cracks, no voids, no nothing. It was just leaking from the structure of the concrete. And we have produced this technology to really inject it into this structure, we have drill holes, and as you can see there are different Packers, all of them open and one of them you know, show water, some of them show resin, some of them are already injected with the occurring gel, acrylic gel. The time of reaction was was around three minutes, two and a half, three minutes. And as you can see we inject into the one pucker into

Mateusz Furs 18:00
The structure of it using our two k pump took a piston pump and then every single Packer shows us a little bit this different story. So, we we know exactly where our accroding gel arrived, but not not all this information Yeah. So, this is the this cortisone injection This is to buy threatened because the space

Mateusz Furs 18:30
in the behind behind the wall was like big and I wanted to this this resin to really create some form to fill the gap.

Mateusz Furs 18:41
And let me come back to this because you know, at the beginning nothing was happening. But then here we go we are removing water from the gap. And in a second there was a resin coming. This is an expansion joint injection Yeah, we're injecting a acrylic gel. And the reaction time is around one minute and a half. We wanted the time to be really fast because because there was water going inside of the expansion john and i didn't want the the resin to mix with water too much. So I wanted to have this reaction time really fast and look what happens. We can see this packer and that the water was started to go through it because we were you know fitting the expansion joint inside with resin to this to this level, and now we are starting to inject resin from another Packer and the flow increases the flow of water. We are removing water from expansion joint and there is no other way To remove water from an

expansion joint rather than this. So imagine if we use Packer with already installed nipples. It's impossible to get rid of water from the expansion joint from the inside of it. And look at this, look at this.

Mateusz Furs 20:20
So the water is flowing, we are injecting them back. That's it. That's it. So that this level is filled, this level is filled Yeah. And the last concrete injection we know it very well.

Mateusz Furs 20:36
Almost everyone was of us was present during this kind of injection job this this slab is around 45 centimeter. And then you can see some Pew base residence that was coming through crack, but observe this Parker. You can see that The resin is flowing out of it that means that we have failed this this part of of the crack. So I hope that this short video already explains why using this kind of injection Parker without nipple and the nipple lighter to be installed as the injection process is going on. This is really a huge huge advantage on the jobsite Okay, now I have something else. I would like to explain a little bit about this structural injection into the top slab. So we had the slab that was you know and destroyed and it was filled with water like a sponge. And then we have drilled some holes and we have cut rocks and you know this this whole concrete above the concrete was another layer of concrete floor. So, some of the resin my stay after the injection process in between of those two concrete parts. So, after we drilled the holes we cleaned them we installed Packer as you can see at the moment and then we started to inject the resin. So, there was a nice color red and so, after the resin was injected into the hole started to spread in the cracks and in the structure of the concrete itself. And we were you know, going from one side of this saving to the other one and we as you could see on the video. The Packers were

Mateusz Furs 23:00
The holes were you know showing where exactly the resin was already delivered, which is so so, so important. This makes you the understanding where you are, how the process is going on a the resin is reacting properly, and so on. So, okay, the first question is why we should make small amounts of resin? I really insist on that all the time. I keep saying this like crazy all the time that I encourage my employees to eat in to makes really small amounts of bread. So

Mateusz Furs 23:43
this reduces the risk of heart resin hardening inside the pump. Yeah, because if we make too much resin at one time, it might happen. So, we have to remember that the larger question quantity of already mixed resin will absolutely have shorter life because the reaction creates the temperature and the temperature makes the reaction to go faster. If the reaction goes faster, it produces more temperature and this is change direction with that will no no absolutely won't stop and there is one more thing this injection pump This is the diaphragm Diaphragm Pump. It also produces and creates heat and this heat is unfortunately a warming up the resin itself. So the reaction in the pump will go even faster. So if I use the small hopper like this, you can see this is the plastic used old plastic from the Water, Coca Cola, other beverages, so we can find it everywhere. It's small. So it's like forces us to to make small amounts of offers.

Mateusz Furs 25:15
And one more of course, the viscosity, we, if we are talking and we are talking about crack injection, the visit low viscosity is like, number one factor. The lower viscosity is the easier and faster and we're using the smaller pressure we can inject the resin into the crowd. So, at the very beginning of the reaction

when two different subcomponents of of resin are mixed, the physical discovery is really low. Yeah, but as the reaction goes, the viscosity rises and then We can have this situation that the viscosity will be so high that it will be or nearly impossible to inject it into their final concrete crack. And yeah, keep Please keep in mind that the size of the crack is really small that as I said before you we consume more resin to fill the holes with it rather than to fill the cracks. So we really don't have to, you know, make huge amounts of resin at one time. That's it. This is my lair from pump with this hopper made of plastic beverages bottle. And there is like two things I would like to highlight at the moment. So of course the pump is dirty. I know. The hopper is dirty, but that's the point.

Mateusz Furs 27:00
If we use this kind of hoppers, we can, you know, change them easily, almost every day because this bottles are really really for free. So, in the in the hopper, you can find took a few bites for every 10 based non foaming grow viscous resin and I love this kind of resin, no matter the brand, every single manufacturer have this kind of resin and sell and provide this kind of read. I love this resin because when it's injected into the crack, it doesn't show foam. This foam really blocks the resin to flow in inside the crack because the foam is when it touches the water. It looks like we use foam to stop and to block flowing water

Mateusz Furs 28:00
And it happens also inside the crack. So I really insist on using non forming peel bites rather than when we inject into the crack.

Mateusz Furs 28:13
Okay, and I have produced this adapter and each thread is, you know, fits like Coca Cola bottles. So, it's really easy to to find another hopper if the one we used before, dirty or is destroyed or whatever.

Mateusz Furs 28:34
Smaller hoppers also really hope you to really help you to

Mateusz Furs 28:43
observe the consumption of resin, because again, when we inject into the really, really small fine crack, the consumption of resin is almost nothing. And sometimes it's hard to understand if the resin was injected into the crack or not, this container really helps you to understand.

Mateusz Furs 29:07
4th question. So the question is, if I can start to sell your product, if you are the producer or manufacturer of some kind of resins and other products, then then we were able to really yeah.

Mateusz Furs 29:37
So I would, I would, you know, strongly say, yeah, it's not that easy for me to start to become a reseller, because I'm an applicator and I run my own business. I'm not a sales rep, right. However, I'm thinking about you know, making this kind of video courses.

Webinar participant 30:00
showing how to use kind of residence for injection purposes only. So I'm not interested in floorings and other coatings. But if it's injection resin and if we sign a contract that I will be able to produce this affiliate links then I find it interesting to you know, make a video course that will present your product

that in which I will explain step by step, how to make it, how to use it, how to apply it, how to avoid some problems using this this product and then this this course video course will be for free for everyone. But below the course there will be different saying that if you want to buy it, you can buy directly from this and that producer or manufacturer and I will get some commission from this manufacturer so if you say that this kind of relation business relationship fits your idea then yeah, this is my idea how to monetize my business, my online business, but in the future like 111 and a half year in the future from now, it's not for today. So we can spend this time you know, preparing everything, if you find it interesting. Okay the free copy of 10 core principles of effective crack injection, you will get it and sold like in 15 to 20 minutes and just after this webinar is over, and, and if there is a new version, or you will be off course will be, he will get a great and I insane you that You will absolutely get this new version because I'm working on this at the moment. It's almost done. But it's not yet. So within a week or so, you will get another email with this new version of this corporate support principles for crack injection, which are love some of these ideas I already covered in this webinar, but there is like some points that are I find really, really, really important. Okay, so I have answered some questions. I showed you the video I showed you the free copy of I explained how you will get this free copy. So it will be basically, you know, emailed the link to this. core principles will be emailed within let's say 15 minutes from now. And now let's say if let's check if there is some Questions. It says that cliff has risen his hand, but I have no idea how to how to say so cliff, can you type your question or whatever you want to ask at the moment and you? Can you hear me? Oh, yeah, I do hear you. Yeah.

Webinar participant 33:18
So I'm just don't see exactly where the questions require to be typed.

Webinar participant 33:26
Yeah, that's good. That's good question. So since we can hear each other, can you just say the question,

Webinar participant 33:33
we have quite a lot. I'm happy to put them in to type them and email them or something, even

Webinar participant 33:41
if you could just shoot me an email. That would be great. So where is the where is the question?

33:51
I'm just trying to see where we try. I will just type a small question here, but I've quite a long list of about 10 or a level well,

Webinar participant 34:07
so I understand. So I hope I will manage to you know, ask them. If there is a no long list of questions, I will gladly, most probably, you know, make another webinar, I will prepare myself which will be to find good. Good question. Good answer. Okay, so what about pre cleaning of the joint You mean the expansion joint

Webinar participant 34:41
or fissure or whatever you're injecting, do you recommend suggest or is it essential to absolutely,

Webinar participant 34:50

yeah, I didn't focus on this. Because I was just you know, explaining this, this using of injection Packers or I didn't Come to this, and I wasn't like saying step by step how to inject how to seal an expansion joint. But absolutely. So my employees as we speak in Warsaw are claiming expansion joint of almost 40 meters at the moment. And they are removing everything that's inside. So there is a plywood, a concrete, some produce, produce things that were used to seal this expansion joint. And we are absolutely removing everything that's inside to first of all, create the space to inject resin, our resin Yeah. And then we need to make sure that the internal walls have an expansion joint on the right and on the left of this expansion to are clean because we need the resin to really stuck to it glow to it and work with an expansion don't as it changes it's a witch during the air. So absolutely This is necessary to make the internal walls concrete walls of of the joint properly cleaned.

Webinar participant 36:29
Yeah, and I guess even more important when it's not something like an expansion joint which is quite large but when injecting micro fissures or whatever then even more important to make sure that the joint is clean so that you get a travel continuous travel of the resin the resin along along the feet feature.

Webinar participant 36:56
So yeah, when we can See that the the joint was in all the linkages took place for years, not four months, three years. And we can see some sounds and some other things that are you know, going out of this joint. So after the So first of all, we drill more holes but one or one running meter of this of this crack or of this joint. And then before we inject the resin, we try to use the same fuckers and we inject water inside to somehow clean and the internal walls of this joint with this water coming from Packers from the host to read so it makes this space inside a little bit bigger. So this is like, this is the special case. We don't do it all the time. But yeah, it happened from like, perhaps five times you During my you know, during running this company that I made a decision to clean the joint, the small joint cold joint and using water from the pump, even before we have started, very started to inject the resin itself. Yeah. So I hope that this answer was good enough.

Webinar participant 38:29
Yet it is what I think it'd be easier for you and avoids wasting everybody's time a five. Immediately after the webinar, I'll put all my questions down, take 10 minutes to put them down and send you an email. I'm quite happy for all the other participants to see the questions they may may be the questions may be of interest for them, and they may have experienced to share

Webinar participant 38:59
so So, as far as soon as I get the answer your questions, I will produce my prepare my answers. And then I will shoot you all of the people who, who signed up for this webinar, not only you who really take from some time to be able to join this webinar, but I will send to everyone who signed up your questions and my answer to this question so we can all have the ability to share this knowledge. Yeah, what do you say?

Webinar participant 39:38
Yeah, sounds good.

Webinar participant 39:39
Yeah, cuz great role for me for me is perfect.

Webinar participant 39:44
Even perfect. That's, that's great. So that was it. That was this you know, most important questions. Many people ask the same questions many times. And that was the, you know, main main message from me Tomorrow is first day podcast for today. So this webinar will be transformed into podcast. So meagle any questions, commit any questions?

Webinar participant 40:15
Please don't have any questions. But I think it was very good Mateusz, congratulations. And well yeah, I was I was, it was excellent. I was very surprised with the Coca Cola model. I have to admit it.

Mateusz Furs 40:33
it's not, you know, the commercial of Coca Cola, but this kind of bottle of water and so it's easy to attach. And

Webinar participant 40:45
yeah, perfect. This. Of course, it can be.

Webinar participant 40:55
You can use it for once and then you throw it.

Mateusz Furs 40:58
That's it. That's it. So I've been using this kind of hoppers for like three or four years now, and I don't buy any hoppers. And it's uncanny. Six, six liters is very, very smart thing. So

Webinar participant 41:19
yeah, I can this adapter on my own I have it made for using the stainless steel, so it's forever. Yeah, well, one will work even longer than the pump, I guess. And yeah, so I find this really good solution for especially for practical crack injections when we really once again use small really small amounts of resin.

Webinar participant 41:47
Alright.

Webinar participant 41:49
Have a great rest of the day as a dx for being here, and I'm waiting for your questions. Cliff and as soon as I get that I will prepare my answers. And basically, I end my meeting and I produced the podcast so we can all hear it tomorrow morning. All the best to you. Ciao. Bye bye.

Webinar participant 42:16
Thank you. Thanks for putting together.

Webinar participant 42:18
Thank you very much.

Webinar participant 42:21

In two weeks, we will meet with several manufacturers of injection Packers. They answered four questions about the market situation, their achievements, and the future of our industry. If you are curious about what your suppliers think about the industry, this episode is for you.
Thanks for listening, and I hope you tune in next time