

Concrete Injection Made Easy

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#002 Why the watertight business will not go away with Nick Chittenden from BASF.

Mateusz Furs

Welcome to the second episode of the "Concrete Injection Made Easy" podcast.

In today's episode, we ask the hard question of what if.

Together with Nick Chittenden, we use our imagination to see what's behind the wall.

We also use our imagination, even more, to find out how to make injection an insurance policy.

We talk about the knowns and unknowns not knowing why we seem to choose the latter so often.

Make sure you stay with us till the end if you want to know what risk management is when comes to waterproofing.

Nick Chittenden also reveals his idea of why the watertight business will not go away in the future.

Make sure you hit subscribe if you haven't already and sit back listening.

This is Nick Chittenden from the Master Builders Solutions. He helps me understand the picture of the construction business and how much I should still learn. That's what he does.

Don't let me wait any longer, I invite you to listen to the conversation with Nick.

Nick, it's great to have you on the Concrete injection made easy show. This is my first interview, you are a brave guy...

Nick Chittenden

Thank you, Matt. Yes.

Mateusz Furs

Uh, we met the other day on LinkedIn. You were commenting on my posts about some injection and concrete. So I understand this is your business, this is your life. Can you tell us a little bit about yourself and why you find interesting to comment on my post?

Nick Chittenden

Oh, okay. So, um, so your post was on a, uh, a joint in a concrete structure below the ground. And my business for the last 20 plus years, 25 plus years is been in tunneling and underground construction, both in the civil engineering and mining engineering business. And it never ceases to amaze me the misunderstandings that, uh, main contractors and clients have about the business of injection and grouting in general.

Mateusz Furs

Um, OK

Nick Chittenden

and it's not, um, it's not a rocket science and

Mateusz Furs

No, it's not.

Nick Chittenden

and it's not a blackout either. There's some very basic logic behind what what is done and very importantly, and more importantly, and the thing I think that we need to, uh, highlight in our discussion today is that it's not something that you can just allocate all the responsibility to a subcontractor to go away and produce miracles.

It needs to be a partnership with all of the people involved.

Mateusz Furs

I like this expression. It's not a rocket science, but if we consider it to be a rocket science, maybe it will, we will all pay more attention, all this to build it more properly and yeah, that's it.

Nick Chittenden

Yeah, absolutely.

Mateusz Furs

You are a British man, but living where? Somewhere abroad..

Nick Chittenden

So, yeah, I'm based in Dubai. Uh, I've been here for about 12 years now,

Mateusz Furs

12 years.

So what made you to move, to move there?

Nick Chittenden

My business, my business. My company asked me to come here. Uh, I was working at the time in South Africa on the Howtrain project.

Mateusz Furs

Okay. So you already were living abroad? Not in Europe.

Nick Chittenden

I've lived abroad since 1994. I see. All right. My first stint overseas was in Taiwan and then China, Singapore, um, six years in South Africa after that.

Mateusz Furs

Okay. Then Dubai seems to be the closest place, uh, to Europe.

It's only six hours in plane.

Nick Chittenden

Yeah, exactly. I did a few years in, uh, in Switzerland where another company, no. Uh, no Master Builders Solutions. And then I came back to Master Builders Solutions after I did my masters in tunneling at the University of Turino.

Mateusz Furs

I see. Wow. And it was the year off..

Nick Chittenden

Which one?

Mateusz Furs

The masters,

Nick Chittenden

2005, 2006

Mateusz Furs

Yeah, I was finishing my studies in 2000.

Since he was stay at home. We all know why this is. This is the great occasion. So we can, we can use this time to have this conversation on leakages on, on concrete repair, on our business. Um, I bet. I bet that you, um, go and visit many job sites around Dubai and I've been there in December last year. So I know that there are many job sites around to visit. What kind of problems do you see there? What kind of problems do they face every day?

Nick Chittenden

Okay. I mean, um, I don't see as many nowadays as I used to, um, when I was dedicated to just the UAE business. But, um, I mean typically, um, it's a repeat of the same issues all the time.

Um, I mean, when we consider any construction process regarding waterproofing, let's say, 30% is, um, the materials, 30% is the detailing and the design if you like. And then 40% is the execution.

Mateusz Furs

Okay.

Nick Chittenden

So, um, if we look at it all the way from the shoring, if you've got a design for a, um, a pile structure that demands that you have the overlapping piles with the hard pile of soft pipe and the piles don't overlap, then you have the potential for a leakage. So one of the things that I saw a lot very early on in Dubai, I think mainly because of the, the rush of construction was um, uh, very poorly done, piling works with gaps in between the pilots.

Mateusz Furs

Sounds familiar

Nick Chittenden

Now that could be a number of reasons, something you've seen and the subcontractor during construction would have the de-watering turned off and they would finish the job for the subbasement and then hand it over to the main contractor, at which point they would turn the de-watering off.

And, um, and then you'd start seeing where the leaks were coming. And at that point there was very little knowledge about what the subcontractor had done and why they'd had a problem and why they had, um, maybe, you know, uh, there was wash out in the concrete or they had hither older or whatever it may be, but there wasn't that information passed on.

Mateusz Furs

Yeah. I just wanted to ask the question why other people don't know what happened before. So this is the lack of the idea how to pass the information between subcontractors?

Nick Chittenden

Yes, absolutely. So you didn't have this continuity or within the project management of the building and the basement right from the excavation. So it was like this, the excavation was one part of the project, building the structure inside it was a separate part and they didn't meet. So then when you came to doing the waterproofing, that was completely separate from the shoring. And yet if the shoring was good, it made the waterproofing very easy. And if the shoring was really bad, it made the waterproofing almost impossible. And also if you had the de-watering still on and you put the waterproofing up and then you put the basement structure inside it and you built the building and then you turn the de-watering off, if you then start to say, well, where's the leak? You're looking at a carpark wall, an off shutter finish and its leaking.

But nobody knows what happened in the foundation engineering grant, which was...

Mateusz Furs

Two years earlier or four years.

Nick Chittenden

Exactly. So this disconnect between the separate sections and of course at that stage everybody looks for either the material supplier, which is the role that I was taking with master builders solutions, all the specialist applicator.

Mateusz Furs

So we are in this situation that someone realizes... it's impossible not to notice that we have a leakage. Yeah. What do they do?

The whole building is almost complete and sometimes it's even sold. Yeah. There are people starting to use this car park, you know, and so on and so on. And there are several linkages all around the car park, visible.

Nick Chittenden

Well as I say they that there's different approaches and it will depend on the um, what the waterproofing package was at the beginning. So if it was a supply and apply with a warranty and um, the applicator took responsibility for providing a water type structure, then that applicator which start to work now.

Mateusz Furs

Yeah,

Nick Chittenden

Quite often they wouldn't bring in a specialist crew for doing that work. It would be an, and this is one of the frustrations that I used to see a lot was the guys would try to deal with the problem just where you see it. So in the final wall, whereas the problem may be to find out what,

Mateusz Furs

the final wall, where the water is visible, is almost exactly in the center of the building, which is a 100 percent not the place where the water gets into the construction.

Nick Chittenden

Exactly. And that's trying that imagination to look behind the wall and try to picture now where is, where is the void, where is the water coming from?

Because injection, like we said at the beginning, isn't rocket science know all injection is, is filling a water path with an engineered material that will seal that water path and prevent the water from coming through it. Now. So identify the characteristics of that water path. Um, that void in the structure somewhere somewhat. You need to have some imagination, you need to have the as built drawings, you need to have an understanding of the shoring works. What was the waterproofing system that was put in place? What was the quality assurance done on that waterproofing system and the detailing, as we mentioned just now, 30% product, 30% detailing, 40% execution. So those aspects, the quality assurance, the quality control, the documentation and all the way back to the shoring and the ground conditions. So all of those have an impact on what you're going to do to most effectively stop the water coming into the structure. At the end of the day,

Mateusz Furs

I can say that, uh, here in Poland it works like that. I also, the form there is a UN management, uh, or the real estate, uh, asking me to come to see because they have a linkages in many places, two floors parking place. Uh, and um, I start to ask them questions about like if they have any documentation, if they can send me some pictures describing this linkages. And the first answer is no documentation. Of course they can send me the pictures, but it's better for me to come to see it in my own eyes.

Nick Chittenden

Of course

Mateusz Furs

They cannot answer any other questions, Uh, they see the situation is being too much complex. This is how it looks like here and well, what you say is exactly the same.

Nick Chittenden

And quite often we're not the first person to be called, we're the second or third because they've tried to go with the initial approach of just dealing with the surface.

Mateusz Furs

With paint...

Nick Chittenden

So maybe hold, yes, paint is one, uh, some cementitious waterproofing materials is another one. This fast reacting. Um, and also just drilling short holes. And using one component polyurethane. Now that product is appropriate in certain situations, but you still have to put it into the right place.

Absolutely.

To define that. You need to understand what's happening behind the wall. Uh, what is the parameters of the crack? Where are the reinforcing, why has it cracked, et cetera, et cetera.

Is it concrete issue? Are there voids? The concrete, I mean, one of the, um, one of the biggest jobs that we had right at the very, very beginning of my time in Dubai, uh, was, uh, an unfortunately the other factor on all of this is you can't mention the names of it....

Mateusz Furs

I was just about to ask you...

Nick Chittenden

So I can't tell you that. But, but just to say that there was, um, a diaphragm wall, which was supposed to be, um, uh, watertight, and my colleague who was dealing with it at the time could fit his arm, up to his shoulder into the hole, into, and of course...And of course there's water coming through that as soon as you turn the de-watering off, so you need to have an approach to be able to deal with that. And coming back to the shoring and the preparation is that, um, you know, where you've got piles as part of the shoring system for example, and you have a high water table, you can, you can reasonably plan and expect that you may have a problem later on.

Yep.

So why not actually start that planning process right from the beginning, knowing this, engage with injection experts and either look at trying to seal the rock behind the shoring with let's say, injection of a low viscosity, seven tissues or colloidal silica type material. And if you need to help rehabilitate the, um, the, the shoring, the diaphragm wall or the, uh, the piles, make sure you've got a good quality shotcrete, um, subcontractor available. It could be either wet or dry. I'm a pro. I prefer the wet shotcrete system myself, which will enable you to help control the water into pipes and then deal with the situation. Once you've got the water controlled into a pilot,..

Mateusz Furs

at least you will exactly know where the water is coming from and you can control. But the first idea of like you mentioned the injection of the rock, uh, will be, uh, my, uh, favorite one because I like injection, uh, solutions somehow.

Uh, like when I compare the painting of the wall, which is totally everything visible, no imagination at all unit and injection. So I chose injection, but that will be one of the very rare examples of the situation where the injection is needed and it's not considered to be the money loss. It will be in the budget...

Nick Chittenden

Absolutely.

Mateusz Furs

...To solve the situation...

Nick Chittenden

Yeah. And that's, that's interesting because that's one of those applications where you've got two industries that work quite remotely from each other. So you've got the tunneling industry and the deep basement industry and um, you know, at the end of the day there's a crossover and an overlap when you start doing metros for example, because an open cut station is just a deep basement and you know, the launching shaft of a TBM for a Metro works, which is all tunneling, is just a big basement quite often and then utilized as part of the station thereafter.

So there's quite a bit of overlap there. And um, yeah, using pre uh, pre excavation grouting can help in certain situations. Starting and finishing of the TBM in particular is one of those areas. So we did, um...

Mateusz Furs

I had the chance to interact in those, uh, in the end of this tunneling, also in 2015 I was, I was lucky to be there.

Nick Chittenden

That's, that's good. So, uh, so you know what I'm talking about with this overlap. Now, one of the things in tunneling that, um, uh, is receiving a little bit more attention nowadays I believe is this pre excavation grounding. **And not to say that they should be used in every basement, but the concept of considering injection at the beginning to minimize and plan the injection that may be needed at the end. It's like an insurance policy.** So the more care and attention you take at the beginning or investment you take at the beginning, the less you have to spend later.

Nick Chittenden

And, even perhaps you will have to spend some time like a wrong, well, at least you got the chance to spend less.

Nick Chittenden

Absolutely. And you will can also plan it and you can engage with a specialist applicator early who can see the process through and maybe help highlight areas where you can avoid doing large volumes of unknown injection by doing a small volume of known injection. Deal with it before you have this situation.

Mateusz Furs

And the unknown is always better than alone of course.

Nick Chittenden

It can be planned, it can be quantified.

Mateusz Furs

And put into the budget, put into the budget because it's like, yeah, I'm considered to be the money grubber who comes and say that this injection will cause this and that, uh, well it's not my, uh, problem that someone had made but decision three or four years every year when I didn't even know this construction site took place.

Nick Chittenden

Yeah. There's always, and also the other challenge of course is there's always somebody who will offer a cheaper product at a cheaper application and probably not spend so much time doing the imagination and the investigation and the evaluation and the design side of it and more time drilling short holes, placing a pack guy, injecting a cheap material and not sealing it.

Mateusz Furs

But I want it for that time works. I really wonder and I would love to see you, uh, asking the serious of questions investigating and the problem on the side, like how much time do this uh, conversation, uh, should last last to really make you convinced that you gathered all necessary information?

Nick Chittenden

Well, it's again, um, sort of where I was going with it from the beginning is it's all part of a risk management approach and every project should have a risk management in there.

Part of that risk management is what if, and at some point they're going to have to say, what if the shoring fails? What if the waterproofing fails? What if we get to leak coming through our basement structure? And all of this should happen before you turn the dewatering. And if you can do that and you can manage that process, then you minimize any surprises. And that's the insurance, um, risk management approach to that. Both the material supplier and the specialist applicator would like to approach because I don't get a call from a company saying I've got a leak. You need to fix it tomorrow because I've got to hand it over next week. Yeah, okay. All right, that's great. I want somebody who wants to buy my products, then that's fantastic. But if I don't have them in stock or I don't have the right type of materials, so we then trying to use something that's not really ideal for the application, then you have a sub, a sub ideal situation.

So it's much easier to be able to plan it, to be able to have somebody say, look, I don't know if I'm going to need it, but this is the situation. This is the structure we've got. This is what we've built, this is what's going to happen. We're going to be turning the de-watering off at this point in time. And we've got a couple of situations where we think we, you know, possibly in the risk management, the what if say we may have this scenario and then we take that forward and I can say, right, we need to get this amount of this material in stock. We need this amount of this material available if you need it. And if you don't, great, we'll take it somewhere else. But planning,

Mateusz Furs

planning, and cooperation with, uh, between you, uh, being, being a supplier and not only the supplier, cause you also, uh, uh, have huge knowledge so we can just help them to solve the situation. And between you and contractors and subcontractors, this corporation, how does it to work in, in Dubai? And I mean, who, uh, invites who on the job site?

Nick Chittenden

So I have a couple of, uh, specialist applicators, um, within the Dubai market. Um, and we like to have, let's say two or maximum three different applicators because one may not be available. So we want to be able to answer our, customers requirements and, either we bring them a job. So let's say it's a waterproofing project where we are actually looking at supplying the waterproofing as well. Okay. And you know, one of the things that we will always do is try to

engage with all parties and take the approach that I suggested with regards to planning the WHAT IF. If, so, you know, if you accept that and you spend the most amount of money on the waterproofing with the backup systems available so that you can, if you need a, solve any problems that happen. So you can, you know, deal with, you know, what happens if you know your pure post curative, uh, maintenance mechanisms.

So if you've got, let's say, elucidate PVC, compartmentalized with double layers of PVC membrane right the way across the structure, then that gives you the best opportunity possible to identify where the leak is coming from and have a system available planned to be able to deal with it. So that's the easy one. Less easy is when it's another applicator, another contractor who hasn't been able to solve the problem that they tried first of all and then the client finds you and says, what can you do here? And that one usually comes through the specialist applicators. They come to us and say, we've got this application, we're going to use your products, come and have a look on the job with us and let's work out together what's the right product and how we're going to do it.

Mateusz Furs

Yeah. My third question I ask on the first a phone call from the site is was there an a a their previous tries of injections that site because it happens a lot that there was the first try meaning the one that was designed? Yes, there was the second try meaning first try of injection and the fastest, the cheapest someone was on the side already doing some electricity jobs or you know, some, some someone found by accident and the third one, which, which is in this situation where this situation has to be solved now or yesterday or the day before yesterday. So this is my, third question.

Was there any other injection jobs that have been, uh, used? Um, well, unfortunately many times the, this, uh, question is, uh, answered yes, there were those situations. So again, you don't, you, you in this, in this situation, you have to dig even, even farther, uh, with, uh, another questions because you have to find out not only how the construction has been built, but what kind of injection materials and how have been used.

Um, so the, this amount of questions, needed to be answered is even, uh, uh, longer.

So I must say that when I was in December, as I mentioned, uh, last year, uh, in Dubai in December last year, I was on the Burj Khalifa on the 125th floor. I was standing there.

Everyone goes there...

Nick Chittenden

Of course...

Mateusz Furs

... as well, and I was looking at the city around me and I had only one, idea of look at this whole buildings. Every single building has, of course, the parking place, parking place is of course underground.

Nick Chittenden

Most of them

Mateusz Furs

Imagine Mateusz I was talking to myself, how many parking places, how many possible leakages you can find them. So being on holiday in Dubai and I was only thinking about concrete repair, linkages, parking places, you know,

Nick Chittenden

it's interesting, I mean there is um, we've been very lucky this year. We had quite a lot of rain at the beginning of the year and that's, that sort of brought up quite a few projects, um, that have reached that stage. And then the watering has been turned off or the de-watering has reached its capacity and the water levels have started to rise because of the, the rain and what have you and projects come on and start saying, we've got a leak raining. It doesn't happen here very often.

Mateusz Furs

Well, a couple of years ago I was really wondering if any, you know, injection resin are, are being sold in Dubai since it's a desert. So, uh, well in the end I found out that maybe it's desert right next to the sea, so you still have water.

Nick Chittenden

Oh yes, exactly. Um, and, and, and you've got to, of course, when you start dealing with that, um, the pressures for most of those basements and not sort of in the same level as you are dealing with, um, for the tunneling applications, but the types of materials is still, it's still important to understand the, the type of materials that you have available and what you want them to do. So again, a little bit of pre-planning and imagination is, um, is useful when you consider the materials as well. Um, and um, you know, uh, there's usually a one component type system which is what we're talking about where you use a, a pump with a single piston, uh, usually a piston pump, um, or a two component system where you have a single motor with two pistons providing usually a 50, 50.

Mateusz Furs

Um, yeah, the mixing ratio is 1:1.

Nick Chittenden

Normally there are some that are a bit different, but, um, typically that's the easiest one to work with. And uh, I'm a big fan of the two component systems. Um,

Mateusz Furs

PU based or the acrylic based?

Nick Chittenden

Doesn't matter. Um, again, you use different systems for different applications. Again, it will require, do you need a structural repair, do you need just water stopping? Are you trying to stop the water in the rock or in the concrete or in the interface between the shoring and the structure. It depends on what you're trying to do and this is where the imagination and the black art come.

Mateusz Furs

Yeah, this is my favorite. This is my favorite part of this, of this interesting imagination. And you know, just knowing uh, imagination like where the resident is flowing, uh, through the little holes

Nick Chittenden

Um, exactly, exactly. And then, you know, as I say from the materials side of things, you've got high viscous materials like the polyurethanes which won't flow easily but will react very quickly

Mateusz Furs

In contact with water showing foam.

Nick Chittenden

Well this is again why I liked the two components because I can control the reaction to what I want and I'm not restricted to waiting for it to hit the water. So I can actually react component by having a controlled addition of water and appropriate accelerated depending on the temperature in the part A of my two component system. And I can adjust that according to what I picture in my head as the problem I'm trying to solve. So if I want it to come out and be foaming within seconds, then I have a longer delivery pipe after the mixing and I add some water, 1%, half a percent, whatever it requires. And by the time it's coming out of the end, it's already foaming and reacting. On the other hand, if I'm trying to deal with a very, very fine joint with just seepage water and I want the material to flow for a long way, then the polyurethanes aren't really going to be the ideal materials. I want something that's got a low of viscosity so I can push the material over a longer distance and there I would prefer to use the acrylics.

Mateusz Furs

And do you use acrylics when injecting the cracks in the concrete?

Nick Chittenden

For what application?

Mateusz Furs

For water tightening

Nick Chittenden

Yes, I probably would look at using an acrylic for that sort of application. Um, but again, you, what you're trying to do there is stop the water in that concrete structure. So you have to have something with a fairly low viscosity, but at the same time you, the material from any point will always, um, inject in a theoretical sphere. So if it's in a crack, then that sphere becomes a disc and it's a disc that continues to grow. Now as soon as there is a point of least resistance, I the back of the concrete for example, you've got, and there must be a leak point there somewhere because that's where the water's coming in. It may not be directly in contact with that injection point you're using at that point. Um, you move, it's going to start flowing at that point and it's not going to continue flowing out.

So at the same time as having low viscosity, you also want to be able to control that flow quite specifically. Um, and adaptably. So you maybe want to stop it in five minutes and it's much easier and better if you can stop it through the setting time of the grout rather than just using a really stiff, thixotropic grout because that tends to make it harder to flow.

Mateusz Furs

Then you have to use higher pressures on the pump, you can destroy the concrete instead of repairing it.

Nick Chittenden

Exactly. So that's where the imagination, again, coming back to that whole story of trying to picture whether it's a crack, whether you're trying to seal the joint at the back of the concrete in the concrete, in the shoring, in the waterproofing, wherever. So number of different applications, you've got to pick your point and then choose the right material for that. And I think as we both agreed when we were discussing this podcast yesterday, no two jobs are the same.

Mateusz Furs

No, no. I called it the story when I was a young employee of this German producer and it was, I believe it was the second month of my, uh, journey there. I told to the manager that, uh, you know, within this two months, I haven't seen two same projects. And he laughed and said that within 20 plus years he haven't seen two the same projects. So this is it. At least we are not getting bored.

Nick Chittenden

Absolutely, keeps it interesting, that's for sure.

Mateusz Furs

Tell me if you, uh, you prefer to work on the, uh, new construction sites, the buildings being built from the, you know, the beginning or you prefer to repair existing buildings. Older ones...

Nick Chittenden

well, there's no such thing as older ones in Dubai.

Mateusz Furs

OK, Good point, fine.

There has to be buildings, uh, met with the levels 7 - 10 years old.

Nick Chittenden

So for that one, you know, I mean the, the boom in Dubai has been going for a number of years now. Um, and the, as always, you know, when you start getting into scenarios, scenarios where there's a over demand of building and an under supply of materials and expertise, then standards can slit. So there's jobs and applications like that that do come up. Um, but, um, yeah, it's, it's always better to work on a premeditated, uh, approach for me rather than something that's a disaster that, um, wasn't done properly at the time and they've been trying to solve the problem for 15 years and still haven't been able to deal with it.

And then it arrives on your desk because you know, you, you, you're on a hiding to nothing. You either put a price in that is, um, you know, you can guarantee you're going to be able to do it. And everybody goes, well, it's too expensive, or you put a price in that we knew the job and you don't have enough materials, you don't have the time. You don't have the resources to actually be able to identify what the problem is and solve the problem. So it's always, it's always difficult. So, uh, because you don't know what's there. So the unknowns...

Mateusz Furs

So, and for me it's like we are coming back to the beginning of our conversation, what to do, to make the unknown known.

Nick Chittenden

Uh, no for exactly. Right. Yeah.

So for me, the best time for me to get involved in a project or for the supplier of the potential waterproofing and injection system.

Now injection is just one part of the waterproofing system. Because at the end of the day, even if we're dealing with remedial works, those remedial works are only done to try to make good the waterproofing system that was put in place. So the ideal time for that is while the shoring is being done, so to actually take into account the concrete that is used in the shoring, the design of the shoring works, the water tightness. If you've got an assuring system that's 95% watertight, then when you put your waterproofing on the inside of it, it's only going to deal with the last 5%. And that makes life a lot easier. So taking each step of the process and getting involved really early, making recommendations that are relatively cheap early to improve the whole process. Um, you know, dealing with really making sure that you deal with the joints properly. Putting in re-injectable hoses, designing a really holistic approach to the waterproofing and putting in that risk management discussion about what happens if.

Mateusz Furs

You know, taking into consideration that what if is using the injection hoses, we can easily, we can easily predict the, the cold joint will like this is the great way or for water to come into the, uh, to the structure. And you know, we use injection hoses for years now.

Nick Chittenden

Mmm.

Mateusz Furs

Do you find it easy to convince people, decision makers on the job site to buy them, to use them, to install them?

Nick Chittenden

Um, not really my core business, uh, at this moment in time matches. I said my much more involved in trying to work with my colleagues on the injection to solve the problems. My colleagues in the water proofing, um, supply team are very much involved in that side of it.

Mateusz Furs

I'm already happy because I think I have found out another good topic for another podcast episode

Nick Chittenden

and we would be quite happy to support and find somebody that's a real expert on that side of it to have a chat. Um, and you know, again, not all injectable hoses are the same. You really need to be able to have one that's re injectable because the ground moves, the ground changes, the water changes, the water table changes. When you start building one building in a development of five Oh six, the first one will be affected by the one being built next door to it. So everything changes. So you may have a building that's been there for 10 years and not got a leak and then so, uh, and if we have managed your injectable, yeah, of course.

Mateusz Furs

But Why? Because there are many, many really old buildings like built after the second world war. Of course they were dry for years and suddenly second Metro line, a new buildings here and there and the linkages and cracks, you know, appears. So everything's changes even though it's uh, underground and we can't see it as easy as we can see each other.

Nick Chittenden

Yes, no, it's definitely a business that will not go away. And the more we can just engage with the people that are the owners of these projects to help them understand the process and the approach that makes their life easier. Managing the, managing the construction right from the very beginning of the shoring and the excavation all the way through and taking a risk management, it makes everybody's life a lot easier.

Mateusz Furs

I find this a sentence like the headline of this conversation because you, uh, you seem to be very convinced that this is, this is true. I agree. So there are two of us. Uh, hopefully there are some people, uh, listening to this conversation who, uh, also agree on that. Maybe we will change the, the, the world of construction sites for better.

Nick Chittenden

We hope so. And of course, you know, we need to finish up with saying that, um, it's not just the applicator, it's not just the material supplier. It's a teamwork of all of those parts together. Um, and we can coordinate with each other.

So if there is anybody out there listening, um, you know, feel free to, feel free to get ahold of you, um, your local, Master Builders Solutions sales representative, um, and ask them about what they can do to help on the injection. Um, I'm sure they will have applicators like yourself in different regions. And, they need to get together and start the discussion really early.

Mateusz Furs

Absolutely. If you can tell for our listeners how they can reach you, if they have any further questions, you know, to discuss their own construction sites. A problem on the on the side side. Like how can uh, how can we reach you to have this contact?

Nick Chittenden

Well, the best, the best way to reach them because obviously not everybody is going to be based in Dubai and not everybody is going to be able to um, get hold of me directly by email. I'm on LinkedIn, you can find me there. Okay.

Mateusz Furs

And this is the way we went by the way,

Nick Chittenden

This is the way we ended up connecting, um, which works very, very well. But also I would say is look, just Google Master Builders Solutions. And you will find the local website for your region. You can find the appropriate person to talk to about injection and if you, you want to deal with it very early, then ask for the underground construction representative for your region and they will be, they will be an expert on injection as well on the material side. Um, I should just point out that also for the last 17 or 18 years, uh, we've been running workshops held in a tunnel location, um, underground in Switzerland. And really setting the standard for education and training both internally and externally.

Mateusz Furs

So you were inviting, uh, applicators?

Nick Chittenden

For you I would suggest that, um, you need to speak to your underground construction sales representative in Poland. Um, and just say to him, I'd like to come on the next workshop. Unfortunately, they were, had to be canceled this year, which is why we're doing this now. But um, the next ones will be held in October and this is an excellent place to share information. Talk to other experts in the field, not just to meet other people. Exactly. Not just talking to master builder solutions, but all of our customers and they all have their own ways of doing things.

Mateusz Furs

How many people, how many people do you invite?

Nick Chittenden

We will go through between 150 and 200 in each workshop.

Mateusz Furs

Wow. That's a lot.

Nick Chittenden

we have a table or 20 to 25, um, uh, experts in the industry who deal with different types of injection approach all the way from, uh, tunneling, pre excavation injection using micro fine cement all the way through to, um, the use of injection technologies for, um, high performance anchor bolting. So huge range of applications.

Mateusz Furs

So can easily say that everyone will find something, uh, for something interesting.

Nick Chittenden

Exactly, exactly. So, um, you know, and these are been basically filled up and sold out for the last 17 years. So you can imagine how many people have gone through these workshops

Mateusz Furs

And I haven't been there yet, so I have two, I have two infants and even I'm even more happier that we managed to meet and have this conversation.

Thanks a lot for this conversation. If there's any question you would like to ask to our listeners so they can, you know, comment or say something there or leave a comment on LinkedIn because I think I will put that post saying that this conversation has been released.

Nick Chittenden

Um, great. Yeah,

Mateusz Furs

So what will be the question, for, our listeners...

Nick Chittenden

well I think it would have to be challenge us. Um, you know, it's, it's um, we've not tried to tell anybody how to do the job but rather focus on the processes. Um, if anybody's got any experience or anything that they can add to that, then we would love to hear it. Absolutely. And

the one thing, big thing with injection is because every job is different, the more jobs you see, the more tools you have in your bag to be able to solve the next problem. So the question would be a request would be tell us your challenges, tell us what you've got, tell us what you've seen and we can all learn from it.

Mateusz Furs

Absolutely.

Thanks again for the conversation. Thanks for the time spending with, uh, with me and see you all next time.

Nick Chittenden

Okay, great. Thanks Bye bye.

Mateusz Furs

Wow, this conversation was absolutely fantastic.

Nick has a gift in understanding as he mentioned a holistic view of the building industry.

It makes me really happy that he was the first guest because he kind of set the whole idea of this podcast as an overall view of our business. It is exactly what I needed.

Many thanks for this Nick.

It was the second episode of Concrete injection made easy podcast.

In the next episode, you will meet Stephan Delarue from Webac, Germany. We talk about a wide range of PU based resins and how to choose the right one for your job site.

Please leave a review on iTunes, and most of all don't forget to subscribe.

Thanks for listening. Appreciate it.