

1

00:00:00,000 --> 00:00:08,280

On this episode of MythBusters, it's a shocking state of affairs.

2

00:00:08,280 --> 00:00:10,840

Adam and Jamie have a MythBuster meltdown.

3

00:00:10,840 --> 00:00:14,360

I'm just expressing my opinion and I'm not giving you a f*** about your opinion.

4

00:00:14,360 --> 00:00:18,520

And find themselves in over their heads to make killer quicksand.

5

00:00:18,520 --> 00:00:22,960

Pump stops during the experiment we could die because we'll be encased in 20,000 pounds

6

00:00:22,960 --> 00:00:23,960

of sand.

7

00:00:23,960 --> 00:00:27,720

And see what happens when tattoos and technology meet.

8

00:00:27,720 --> 00:00:29,720

And body art go boom.

9

00:00:29,720 --> 00:00:32,200

Who are the MythBusters?

10

00:00:32,200 --> 00:00:35,200

Am I missing an eyebrow?

11

00:00:35,200 --> 00:00:36,520

Adam Savage.

12

00:00:36,520 --> 00:00:39,640

I reject the reality and substitute my own.

13

00:00:39,640 --> 00:00:40,640

And Jamie Heineman.

14

00:00:40,640 --> 00:00:41,640

Quack, damn you.

15

00:00:41,640 --> 00:00:45,120

I wouldn't say Jamie's an evil genius.

16

00:00:45,120 --> 00:00:48,760

Between them more than 30 years special effects experience.

17

00:00:48,760 --> 00:00:50,600

When will the fun ever stop?

18

00:00:50,600 --> 00:00:52,400

They don't just tell the myths.

19

00:00:52,400 --> 00:01:02,680

They put them to the test.

20

00:01:02,680 --> 00:01:06,160

Few things are more shocking than Adam in a bathrobe.

21

00:01:06,160 --> 00:01:08,160

But the first myth gets close.

22

00:01:08,160 --> 00:01:15,600

What's with the bathrobe?

23

00:01:15,600 --> 00:01:20,280

Well Jamie, this time we are attacking one of the classic Hollywood movie myths.

24

00:01:20,280 --> 00:01:26,000

Which is simply, if you threw an electrical appliance into my bath, I'd get electrocuted.

25

00:01:26,000 --> 00:01:28,840

Right, well that means appliances.

26

00:01:28,840 --> 00:01:29,840

Our favorite haunts.

27

00:01:29,840 --> 00:01:30,840

Oh yeah.

28

00:01:30,840 --> 00:01:31,840

Let's go.

29

00:01:31,840 --> 00:01:32,840

Okay.

30

00:01:32,840 --> 00:01:39,480

As Adam said, this grisly death is a favorite with filmmakers.

31

00:01:39,480 --> 00:01:41,600

Take Chucky for example.

32

00:01:41,600 --> 00:01:52,480

Our demonic dog gives the bathing beauty a bath time buzz.

33

00:01:52,480 --> 00:01:53,480

Lots of appliances.

34

00:01:53,480 --> 00:01:56,960

And I see some ground fault interruptors on them.

35

00:01:56,960 --> 00:01:59,720

So there's a rule here about these?

36

00:01:59,720 --> 00:02:05,560

Drift town cannot sell hair dryers without GFI switches for safety purposes.

37

00:02:05,560 --> 00:02:10,440

Which means if these are dropped into a bathtub they would turn off immediately.

38

00:02:11,440 --> 00:02:17,920

A ground fault interruptor detects any sudden change in the flow of electricity and immediately

39

00:02:17,920 --> 00:02:19,680

shuts off the current.

40

00:02:19,680 --> 00:02:24,440

Older appliances don't have ground fault interruptors and so they're potentially more dangerous.

41

00:02:24,440 --> 00:02:25,880

So we need to get some of those.

42

00:02:25,880 --> 00:02:26,880

Here's the radio.

43

00:02:26,880 --> 00:02:31,560

This would definitely be next to your bathtub.

44

00:02:31,560 --> 00:02:32,560

What about this?

45

00:02:32,560 --> 00:02:37,800

It's like zzz versus zzz.

46

00:02:37,800 --> 00:02:40,880

I think this has got more power to it.

47

00:02:40,880 --> 00:02:43,680

No, I think it's this one.

48

00:02:43,680 --> 00:02:46,480

We have a small TV that will fit into the bathtub.

49

00:02:46,480 --> 00:02:47,720

Oh, that's perfect.

50

00:02:47,720 --> 00:02:49,560

That's exactly the television we need.

51

00:02:49,560 --> 00:02:52,120

Honey, I'm home.

52

00:02:52,120 --> 00:02:57,400

The mythbusters have wildly differing ideas about what will happen when these pre-loved

53

00:02:57,400 --> 00:02:59,480

appliances hit the water.

54

00:02:59,480 --> 00:03:00,800

Jamie's negative.

55

00:03:00,800 --> 00:03:06,040

The analogy that I have about what would happen would be about like lowering a light bulb

56

00:03:06,160 --> 00:03:10,000

into the water of the bathtub after you put the toaster in and expecting the light bulb

57

00:03:10,000 --> 00:03:11,000

to light up.

58

00:03:11,000 --> 00:03:12,600

Now I know that's not going to happen.

59

00:03:12,600 --> 00:03:14,040

Adams, positive.

60

00:03:14,040 --> 00:03:17,600

He doesn't realize that the live power of the AC is going to come through one leg.

61

00:03:17,600 --> 00:03:23,440

The bathtub with the drain pipe is going to ground to earth and you will be a very fabulous

62

00:03:23,440 --> 00:03:27,400

conductor of electricity in that short turn of the electricity he's making from the appliance

63

00:03:27,400 --> 00:03:31,040

to the ground and it will kill you very quickly, I believe.

64

00:03:31,040 --> 00:03:33,720

Do I know that you won't get electrocuted?

65

00:03:33,800 --> 00:03:38,080

I'm not so sure that I'm ready to jump in the tub quite yet, but I don't think so.

66

00:03:38,080 --> 00:03:41,960

To be honest, if Jamie doesn't think anything's going to happen, I have no problem dropping

67

00:03:41,960 --> 00:03:44,600

a hairdryer on the bathtub while he's sitting in it.

68

00:03:44,600 --> 00:03:45,600

But something tells me...

69

00:03:50,360 --> 00:03:54,720

Adam, we have about every possible appliance you can drop in a bath and a few more.

70

00:03:54,720 --> 00:03:55,720

What's next?

71

00:03:55,720 --> 00:03:57,360

I don't want to test this in just any old bathroom.

72

00:03:57,360 --> 00:04:02,880

I'd like to actually have an isolated bathroom where we can get clean tests safely with this.

73

00:04:02,880 --> 00:04:07,440

So I'm thinking about having one of the teams of builders build us a bathroom set that is

74

00:04:07,440 --> 00:04:12,560

you know, fully isolated, insulated, waterproof with a grounded bathtub in it that perhaps

75

00:04:12,560 --> 00:04:18,080

above that something like a resettable collapsing shelf where we can put the appliance on and

76

00:04:18,080 --> 00:04:19,480

continually fall into the tub.

77

00:04:22,320 --> 00:04:24,720

Tari and Christine, that's your cue.

78

00:04:24,720 --> 00:04:26,480

The boys need a bathroom.

79

00:04:26,480 --> 00:04:34,160

Alright, so what we're going to do, we're going to try to recreate a real bathroom as

80

00:04:34,160 --> 00:04:36,280

close to a real bathroom as possible.

81

00:04:36,280 --> 00:04:39,600

So I'm going to put up two walls here, we're going to tile it, and then I'm going to have

82

00:04:39,600 --> 00:04:44,400

a bathtub here, a sink there and a toilet there, and hopefully that'll give them what

83

00:04:44,400 --> 00:04:45,400

they need.

84

00:04:45,400 --> 00:04:47,400

Renting it for \$10.

85

00:04:47,400 --> 00:04:49,680

And it's dripping on me.

86

00:04:49,680 --> 00:04:51,400

God knows what's in this water.

87

00:04:51,400 --> 00:04:53,400

And the glamour doesn't end there.

88

00:04:54,320 --> 00:04:56,320

Oh yeah.

89

00:04:56,320 --> 00:04:58,320

Always get the best job.

90

00:05:18,320 --> 00:05:22,800

Of course they'll need to know how much current is flowing through the water.

91

00:05:22,800 --> 00:05:24,360

This is an amp reader.

92

00:05:24,360 --> 00:05:27,560

Going through, the ground is going to go through that so we can read our amps.

93

00:05:27,560 --> 00:05:32,600

And then this is going to go attached to the drain of the bathtub to ground the bathtub.

94

00:05:32,600 --> 00:05:37,240

Now according to Adam, amperage, not voltage, is the killer.

95

00:05:37,240 --> 00:05:38,520

And the lethal limit?

96

00:05:38,520 --> 00:05:40,520

He says 70 milliamps.

97

00:05:40,520 --> 00:05:44,000

You can pump somebody with a million volts and it's going to hurt them, but if it's under

98

00:05:44,000 --> 00:05:46,760

70 milliamps, that's not going to kill them.

99

00:05:46,760 --> 00:05:53,280

The average static electricity shock that you can feel is like 10 to 30 thousand volts.

100

00:05:53,280 --> 00:05:55,240

Now the basic idea is this.

101

00:05:55,240 --> 00:05:56,680

There's a body in the bath.

102

00:05:56,680 --> 00:06:00,120

In this case, a dummy made from ballistics gel.

103

00:06:00,120 --> 00:06:04,360

Two copper paddles in the dummy's chest represent the heart.

104

00:06:04,360 --> 00:06:08,520

The paddles are wired up to a relay which will trip when the current passing between

105

00:06:08,520 --> 00:06:11,120

them hits 70 milliamps.

106

00:06:11,120 --> 00:06:13,600

That means death.

107

00:06:13,600 --> 00:06:16,600

The bathtub's insulated and ready to go.

108

00:06:16,600 --> 00:06:19,560

Now they need someone to get in it.

109

00:06:19,560 --> 00:06:24,920

So what we've got to do is we've got to make a full ballistics gel body for the appliances

110

00:06:24,920 --> 00:06:26,080

in the bathtub myth.

111

00:06:26,080 --> 00:06:30,840

And we're going to use this old mold that Jamie has, which is a beautiful fiberglass

112

00:06:30,840 --> 00:06:31,840

mold.

113

00:06:31,840 --> 00:06:36,320

We're going to have to seal this puppy because ballistics gel filling all the way up if it

114

00:06:36,320 --> 00:06:38,520

starts to leak, we're absolutely screwed.

115

00:06:38,520 --> 00:06:40,800

And we ran into trouble on that last season.

116

00:06:40,800 --> 00:06:43,160

This time he's taking no chances.

117

00:06:43,160 --> 00:06:46,320

Once the mold has been well greased with lard.

118

00:06:46,320 --> 00:06:49,760

He's built entire special of X sets out of lard.

119

00:06:49,760 --> 00:06:53,680

It's sealed tight with silicone and aluminum tape.

120

00:06:53,680 --> 00:06:56,160

Just for safety's sake, double.

121

00:06:56,160 --> 00:06:57,160

We do it double.

122

00:06:57,160 --> 00:07:02,360

Once we do the whole seam, we'll go back and do it again.

123

00:07:02,360 --> 00:07:07,320

Now just pack ice around the mold.

124

00:07:07,320 --> 00:07:13,800

All right, well, let's start getting our buckets and pouring in.

125

00:07:13,800 --> 00:07:15,400

Pray God we have enough.

126

00:07:15,400 --> 00:07:19,760

Pour in the liquid gel and wait for the dummy to set.

127

00:07:19,760 --> 00:07:22,280

Adam's feeling just a little nervous.

128

00:07:22,280 --> 00:07:23,480

Let's get on these and pray.

129

00:07:23,480 --> 00:07:25,160

I don't know to whom.

130

00:07:25,160 --> 00:07:30,360

Is there a patron saint of ballistics gel?

131

00:07:30,360 --> 00:07:39,240

Killer quicksand.

132

00:07:39,240 --> 00:07:42,320

Is that why I'm standing here in the stupid pith helmet?

133

00:07:42,840 --> 00:07:46,880

No, you're standing there in a stupid pith helmet because you're an idiot.

134

00:07:46,880 --> 00:07:52,960

The myth on this one is not whether quicksand exists, it's whether killer quicksand exists.

135

00:07:52,960 --> 00:07:56,560

Like you see in the movies, the stuff that actually sucks you down.

136

00:07:56,560 --> 00:08:00,280

So we're going to try and replicate a killer quicksand that would have some kind of suction

137

00:08:00,280 --> 00:08:02,960

effect or something that would drag someone all the way under.

138

00:08:02,960 --> 00:08:03,960

Exactly.

139

00:08:03,960 --> 00:08:06,560

It's another classic Hollywood horror.

140

00:08:06,560 --> 00:08:12,920

Johnny Weismiller could always rely on killer quicksand to swallow Tarzan's enemies.

141

00:08:19,640 --> 00:08:23,800

But is there even a grain of truth in the killer quicksand story?

142

00:08:23,800 --> 00:08:27,560

Can you really be sucked down into a bottomless pit?

143

00:08:27,560 --> 00:08:32,560

Right around the corner up here, right?

144

00:08:32,560 --> 00:08:34,240

Yeah, have you ever been there before?

145

00:08:34,240 --> 00:08:37,520

Yeah, this is where I've bought fake eyeballs.

146

00:08:37,520 --> 00:08:43,400

Funny thing is, no one knows if killer quicksand exists, but everyone knows what to do if they

147

00:08:43,400 --> 00:08:44,400

ever fall in some.

148

00:08:44,400 --> 00:08:48,440

Isn't that the myth about quicksand that you shouldn't fight it?

149

00:08:48,440 --> 00:08:51,360

You should do the more you fight, the faster you sink?

150

00:08:51,360 --> 00:08:52,360

Yeah, exactly.

151

00:08:52,360 --> 00:08:54,360

That's what I saw in the Tarzan movies.

152

00:08:54,360 --> 00:08:55,360

Exactly.

153

00:08:55,360 --> 00:08:58,600

Jamie's already got a particular sand particle theory.

154

00:08:58,600 --> 00:09:02,280

So there's got to be some kind of threshold of fineness where at a certain point it just

155

00:09:02,320 --> 00:09:04,880

will stay in suspension like mud.

156

00:09:04,880 --> 00:09:05,880

Right.

157

00:09:05,880 --> 00:09:09,480

Well, then we need something that we need like the lowest density stuff you've got.

158

00:09:09,480 --> 00:09:12,160

A bag of your finest sand, please.

159

00:09:12,160 --> 00:09:19,960

And we do mean your finest.

160

00:09:19,960 --> 00:09:24,680

The guys settle on two types of fine grain sand and some clay powder.

161

00:09:24,680 --> 00:09:28,760

So Bob, if we come up with some killer quicksand, we'll give you the recipe so you can, you

162

00:09:28,760 --> 00:09:30,080

know, keep your patrons informed.

163

00:09:30,080 --> 00:09:32,800

Probably, I probably have customers that would like to have it.

164

00:09:32,800 --> 00:09:34,640

So yeah, I think that would be great.

165

00:09:34,640 --> 00:09:37,440

The question isn't whether quicksand is real.

166

00:09:37,440 --> 00:09:39,040

It's real all right.

167

00:09:39,040 --> 00:09:40,640

Just ask Gerald Gray.

168

00:09:40,640 --> 00:09:43,480

I was horseback riding with my family.

169

00:09:43,480 --> 00:09:45,640

I was about eight years old.

170

00:09:45,640 --> 00:09:51,160

Was on the Santa Ana River in Southern California, which is a very sandy bottomed river.

171

00:09:51,160 --> 00:09:54,860

And we knew it had quicksand, but we never could tell where that was going to be.

172

00:09:54,860 --> 00:09:56,680

Their horses missed it and got to shore.

173

00:09:56,680 --> 00:09:58,440

My horse went down.

174

00:09:58,440 --> 00:10:05,640

He sank to his belly and I was afraid to get off and I was warned not to get off because

175

00:10:05,640 --> 00:10:08,240

there was quicksand between me and shore.

176

00:10:08,240 --> 00:10:14,240

But we managed to get ropes from the horses on shore to my horse and pull him out.

177

00:10:14,240 --> 00:10:17,680

Otherwise, he would have perished if he'd been alone.

178

00:10:17,680 --> 00:10:21,400

Quicksand is the result of a process called liquefaction.

179

00:10:21,400 --> 00:10:27,680

Water rising from under the ground oversaturates the sand or soil, reducing the friction between

180

00:10:27,680 --> 00:10:34,920

the particles until they can no longer bear any weight.

181

00:10:34,920 --> 00:10:39,280

When it comes to the full-scale test, Adam and Jamie will need to know the density of

182

00:10:39,280 --> 00:10:41,120

their quicksand mix.

183

00:10:41,120 --> 00:10:46,360

If it's more dense than normal water, it might be a little difficult to sink.

184

00:10:46,360 --> 00:10:51,440

So Myth Turn Christine is sent off to make a hydrometer, an instrument which measures

185

00:10:51,440 --> 00:10:53,960

the liquid density.

186

00:10:54,960 --> 00:10:59,000

A hydrometer is a float with a calibrated stem.

187

00:10:59,000 --> 00:11:02,880

Lead shot acts as ballast, keeping the float vertical.

188

00:11:02,880 --> 00:11:07,200

You take the reading at the point where stem and liquid meet.

189

00:11:07,200 --> 00:11:12,560

Unfortunately, one little slip and Christine's up to her neck in trouble.

190

00:11:12,560 --> 00:11:14,680

Now you've just ruined my threaded rod.

191

00:11:14,680 --> 00:11:15,680

This is trash.

192

00:11:15,680 --> 00:11:16,680

So...

193

00:11:16,680 --> 00:11:19,720

I'll give you the buck fifty later, okay.

194

00:11:19,720 --> 00:11:22,760

Check it on onto the nut.

195

00:11:22,760 --> 00:11:23,760

Think before doing.

196

00:11:23,760 --> 00:11:24,760

Yes.

197

00:11:24,760 --> 00:11:29,320

See, that's not a big mistake on that thing over there.

198

00:11:29,320 --> 00:11:32,280

A thirty thousand dollar machine.

199

00:11:32,280 --> 00:11:35,600

So don't do anything without thinking.

200

00:11:35,600 --> 00:11:39,640

Just stop and think and think again before you turn anything on or do anything with this

201

00:11:39,640 --> 00:11:44,360

until you're really at home with it.

202

00:11:44,360 --> 00:11:47,760

Christine's a really hard worker, which is a good place to start.

203

00:11:47,760 --> 00:11:49,960

Unfortunately, she doesn't know anything.

204

00:11:49,960 --> 00:11:53,560

Jamie is a very good teacher, actually.

205

00:11:53,560 --> 00:11:57,360

I'm going to pick things that are just out of my range of ability, show me how to do

206

00:11:57,360 --> 00:12:00,360

them and then go away.

207

00:12:00,360 --> 00:12:03,640

Walk away and say, I need this by four.

208

00:12:03,640 --> 00:12:07,160

Which is actually very effective with me.

209

00:12:07,160 --> 00:12:14,240

One of the things that we do here for a living is normally using tools and materials in ways

210

00:12:14,240 --> 00:12:17,280

that they're not intended to be used.

211

00:12:17,280 --> 00:12:18,280

That's what we do.

212

00:12:18,280 --> 00:12:23,080

So when we've got junior people involved with that kind of thing, I have to kind of stop

213

00:12:23,080 --> 00:12:27,600

and make a mental note like this is a potential hazard.

214

00:12:27,600 --> 00:12:29,600

You didn't glue that in upside down, did you?

215

00:12:29,600 --> 00:12:36,800

I can't leave you alone for a second, can you?

216

00:12:36,800 --> 00:12:41,280

I think we need to test it in scale first because the real deal is going to involve

217

00:12:41,280 --> 00:12:45,280

a lot of material, so we want to kind of figure out what works best first.

218

00:12:45,280 --> 00:12:50,360

And I figured we'd rig some five gallon buckets, maybe some ways of plumbing them with water

219

00:12:50,360 --> 00:12:54,840

to come up through the bottom of the sand that probably involves some sort of filter

220

00:12:54,840 --> 00:12:56,840

device on the bottom.

221

00:12:56,840 --> 00:13:00,760

And then once we get it all dialed in and figure out how it works, we'll know what we're

222

00:13:00,760 --> 00:13:02,520

going to do on the big version.

223

00:13:02,520 --> 00:13:06,840

And we'll see if there's a difference between how the different sands behave with this kind

224

00:13:06,840 --> 00:13:09,040

of flow of water through it.

225

00:13:09,040 --> 00:13:10,040

Exactly.

226

00:13:10,040 --> 00:13:24,520

Time for a small scale test.

227

00:13:24,520 --> 00:13:26,520

First regular sand.

228

00:13:26,520 --> 00:13:28,520

Fill her up.

229

00:13:28,520 --> 00:13:31,800

Ah, cool.

230

00:13:31,800 --> 00:13:40,160

It supports it no problem.

231

00:13:40,160 --> 00:13:41,160

Right.

232

00:13:41,160 --> 00:13:45,160

In fact, I can push on it and I can't push it down.

233

00:13:45,160 --> 00:13:46,160

That's not moving anywhere.

234

00:13:46,160 --> 00:13:48,280

The sand is totally compacted.

235

00:13:48,280 --> 00:13:50,760

So turn it on really low.

236

00:13:50,760 --> 00:13:54,760

But what happens when water starts to rise through the sand?

237

00:13:54,760 --> 00:13:56,520

Look at that.

238

00:13:56,520 --> 00:14:00,280

It's sucking it up like a cowboy's horse.

239

00:14:00,280 --> 00:14:23,600

But Jamie thinks the water needs to be diffused more evenly through the sand.

240

00:14:23,600 --> 00:14:25,360

So what's going on?

241

00:14:25,360 --> 00:14:26,560

Slight improvements, I hope.

242

00:14:26,560 --> 00:14:29,080

I've got a double diffusion going on here.

243

00:14:29,080 --> 00:14:35,240

We sacrificed an extra bucket or two for this, but in between it also is this fabric, which

244

00:14:35,240 --> 00:14:40,960

is a much finer weave and it should hold our fine sand, if not the other things, silt

245

00:14:40,960 --> 00:14:41,960

or whatever.

246

00:14:41,960 --> 00:14:45,000

What about that goes into this bucket?

247

00:14:45,000 --> 00:14:46,000

Right.

248

00:14:46,000 --> 00:14:48,680

How about sealing the outside edge here?

249

00:14:48,680 --> 00:14:49,680

It'll do that.

250

00:14:49,680 --> 00:14:56,560

Now that there's no fabric, it actually does a pretty good job of having a jam in there.

251

00:14:56,560 --> 00:15:04,280

This time they try one of the sands from the craft store.

252

00:15:04,280 --> 00:15:08,880

At this rate, it's not like I'm plummeting to the bottom, but it is definitely letting

253

00:15:08,880 --> 00:15:15,080

me drop a lot quicker than the sand normally would and it also is resisting pulling back.

254

00:15:15,080 --> 00:15:16,880

Now they're onto something.

255

00:15:16,880 --> 00:15:18,520

Or is that into something?

256

00:15:18,520 --> 00:15:21,600

So you think it's about the lowest possible flow?

257

00:15:21,600 --> 00:15:22,600

Yeah.

258

00:15:22,600 --> 00:15:25,680

There you go.

259

00:15:25,680 --> 00:15:27,160

That's a lot of suction.

260

00:15:27,160 --> 00:15:29,960

That's enough to cause you a problem if your whole body's doing that.

261

00:15:29,960 --> 00:15:33,280

Well, let's try the finer sand and see if we get a little more control.

262

00:15:33,280 --> 00:15:34,280

Okay.

263

00:15:34,280 --> 00:15:35,280

That's cool.

264

00:15:35,280 --> 00:15:40,280

How is it to get back out again?

265

00:15:40,280 --> 00:15:41,280

Feel easy?

266

00:15:41,280 --> 00:15:42,440

Well, not exactly.

267

00:15:42,440 --> 00:15:47,080

I'm going to try and lift it.

268

00:15:47,080 --> 00:15:48,720

So that actually...

269

00:15:48,720 --> 00:15:52,320

The finer sand makes a difference in its suction.

270

00:15:52,320 --> 00:15:55,000

Yeah.

271

00:15:55,000 --> 00:15:57,000

What about the clay powder?

272

00:15:57,000 --> 00:16:00,000

That feels funky.

273

00:16:00,000 --> 00:16:03,600

Yeah, this isn't working at all.

274

00:16:03,600 --> 00:16:09,840

I mean, this is just mud and it won't let the water flow through it at all.

275

00:16:09,840 --> 00:16:15,320

So they've settled on the type of sand and the miniature quick sand rig works well, but

276

00:16:15,320 --> 00:16:17,840

can they make it work on a large scale?

277

00:16:17,840 --> 00:16:20,360

Oh, I think it's definitely going to work.

278

00:16:20,360 --> 00:16:22,480

Without a doubt, I think we've got this wired.

279

00:16:22,480 --> 00:16:25,280

I think we're going to be able to dial the flow in.

280

00:16:25,280 --> 00:16:29,000

It's just a lot of stuff to move around.

281

00:16:29,000 --> 00:16:35,400

I mean, like 20,000 pounds of sand and 15,000 pounds of water and big pumps and stuff.

282

00:16:35,400 --> 00:16:37,200

I mean, it's a hell of a deal.

283

00:16:37,200 --> 00:16:38,920

It certainly is.

284

00:16:38,920 --> 00:16:41,160

And soon the pressure will start to show.

285

00:16:41,160 --> 00:16:45,000

I'm just expressing my opinion and I'm not giving you anything about your opinion.

286

00:16:45,000 --> 00:16:46,000

I'm just saying...

287

00:16:46,000 --> 00:16:50,280

You can give me just about every one of my opinions.

288

00:16:51,280 --> 00:16:57,160

Meanwhile, Adam and Jamie are trying to find out what happens when an appliance splashes

289

00:16:57,160 --> 00:17:00,440

down in your bath.

290

00:17:00,440 --> 00:17:04,640

When that happens, the electrical current leaking from it is drawn towards the metal

291

00:17:04,640 --> 00:17:05,640

drain.

292

00:17:05,640 --> 00:17:12,480

Now, H₂O by itself isn't a great conductor, but the presence of salt helps.

293

00:17:12,480 --> 00:17:17,000

And because the human body contains a high concentration of salt water, the current

294

00:17:17,000 --> 00:17:21,840

passes right through.

295

00:17:21,840 --> 00:17:24,640

It's time to unveil our bath-bound dummy.

296

00:17:24,640 --> 00:17:27,440

Jamie, we have always dreamed of such a thing.

297

00:17:27,440 --> 00:17:29,040

I think we're good.

298

00:17:29,040 --> 00:17:30,040

Let's do it.

299

00:17:30,040 --> 00:17:31,040

He's perfect.

300

00:17:31,040 --> 00:17:33,600

Our first problem has been encountered.

301

00:17:33,600 --> 00:17:34,600

Well, almost.

302

00:17:34,600 --> 00:17:36,240

His arms fell off.

303

00:17:36,240 --> 00:17:39,400

I say we get some carrots and some shallower and have a stew.

304

00:17:39,400 --> 00:17:43,200

The copper paddles are inserted into the chest.

305

00:17:43,200 --> 00:17:49,160

Ballistics gel has similar properties to human flesh and should conduct electricity the same

306

00:17:49,160 --> 00:17:52,720

way.

307

00:17:52,720 --> 00:17:57,400

This relay is set to be tripped at about 6 volts, which we know from experimentation,

308

00:17:57,400 --> 00:18:00,520

means that there's about 70 milliamps traveling across the heart.

309

00:18:00,520 --> 00:18:04,240

But it wouldn't be mythbusters without pyrotechnics.

310

00:18:04,240 --> 00:18:09,760

So Adam's rigged up a flash pot to ignite when the current hits 70 milliamps.

311

00:18:09,760 --> 00:18:12,880

We get a lethal voltage across the heart of the dummy.

312

00:18:12,880 --> 00:18:16,720

It's going to short this wire, poof, and we'll get a nice poof and we'll all know.

313

00:18:16,720 --> 00:18:18,240

And it's instantly reloadable.

314

00:18:18,240 --> 00:18:19,760

The mythbuster way.

315

00:18:19,760 --> 00:18:23,680

Three, two.

316

00:18:23,680 --> 00:18:24,680

That was cool.

317

00:18:24,680 --> 00:18:25,680

Isn't that good?

318

00:18:25,680 --> 00:18:26,680

Right.

319

00:18:26,680 --> 00:18:27,680

This bath is hot.

320

00:18:27,680 --> 00:18:30,400

Time to apply an appliance.

321

00:18:30,400 --> 00:18:33,120

This hairdryer has a ground fault interrupter.

322

00:18:33,120 --> 00:18:38,360

So if the mythbusters have created a proper circuit, it should cut out the moment it hits

323

00:18:38,360 --> 00:18:39,360

the water.

324

00:18:39,360 --> 00:18:46,360

Three, two, one, go.

325

00:18:46,360 --> 00:18:51,360

Uh oh, something's not right.

326

00:18:51,360 --> 00:18:53,280

Oh, look at the water flowing.

327

00:18:53,280 --> 00:18:54,280

It's pumping.

328

00:18:54,280 --> 00:18:55,280

What is our amperage?

329

00:18:55,280 --> 00:18:56,280

What's our amperage?

330

00:18:56,280 --> 00:18:57,280

0.95 AC.

331

00:18:57,280 --> 00:19:00,640

What kind of ground fault interruption is this?

332

00:19:00,640 --> 00:19:03,800

It's pumping water.

333

00:19:03,800 --> 00:19:05,640

I would say that's bad.

334

00:19:05,640 --> 00:19:10,200

Well the relay didn't trip and the ammeter didn't show enough amperage to kill somebody.

335

00:19:10,200 --> 00:19:11,200

That's it.

336

00:19:11,200 --> 00:19:14,440

I think we should try an appliance without the ground fault interrupter next.

337

00:19:14,440 --> 00:19:15,840

So what do we got?

338

00:19:15,840 --> 00:19:19,720

Well, we got a radio.

339

00:19:19,720 --> 00:19:23,920

All right, give me the countdown, baby.

340

00:19:23,920 --> 00:19:31,400

Okay, and five, four, three, two, one, drop.

341

00:19:31,400 --> 00:19:34,640

Tori's shelf collapses like a gallows trap door.

342

00:19:34,640 --> 00:19:36,640

We're up to one milliamp now.

343

00:19:36,640 --> 00:19:40,440

One milliamp, one seventieth of a lethal dose of electricity.

344

00:19:40,440 --> 00:19:45,280

Well, that's bupkus, I believe, is the scientific term for that.

345

00:19:45,280 --> 00:19:47,120

Something's bupkus, Adam.

346

00:19:47,120 --> 00:19:48,840

Question is, what?

347

00:19:48,840 --> 00:19:56,000

The mythbusters call in some electrical engineering know-how for a pow-wow.

348

00:19:56,000 --> 00:20:08,200

Turns out there are two faults in the system, Adam and Jamie.

349

00:20:08,200 --> 00:20:12,000

Well, Jamie, I mean, this is just a classic mythbusters screw-up we've got on our hands.

350

00:20:12,000 --> 00:20:16,200

First off, the resistance of the human body in the bath is more like a thousand ohms rather

351

00:20:16,200 --> 00:20:21,440

than the twenty thousand ohms that we've got read on the ballistics gel.

352

00:20:21,440 --> 00:20:27,480

Then it turns out that electrocution is classified as six milliamps across the heart, not the

353

00:20:27,480 --> 00:20:29,880

sixty we were originally testing for.

354

00:20:29,880 --> 00:20:34,120

And then I screwed up because I had the multimeter on the wrong setting and I was measuring voltage

355

00:20:34,120 --> 00:20:38,360

instead of amperage, which meant that we weren't getting the circuit grounded.

356

00:20:38,360 --> 00:20:40,240

Talk about getting your wires crossed.

357

00:20:40,240 --> 00:20:43,880

Oh well, even the mythbusters make mistakes.

358

00:20:43,880 --> 00:20:46,720

The guys quickly recalibrate the system.

359

00:20:46,720 --> 00:20:48,000

That's it.

360

00:20:48,000 --> 00:20:51,240

And the GFI dryer takes another dive.

361

00:20:51,240 --> 00:20:56,440

Two, one.

362

00:20:56,440 --> 00:21:03,320

The ground fault interrupter tripped immediately, thus proving itself a life-saving device.

363

00:21:03,320 --> 00:21:06,720

Okay, so now the circuit's working.

364

00:21:06,720 --> 00:21:10,800

This older hair dryer doesn't have a ground fault interrupter.

365

00:21:10,800 --> 00:21:15,880

On each drop, the amount of current across the paddles is relayed to Jamie's computer.

366

00:21:15,880 --> 00:21:17,040

I'd call that dead.

367

00:21:17,040 --> 00:21:18,440

Yeah, what are you reading, Jamie?

368

00:21:18,440 --> 00:21:21,560

I'm seeing eight and a half milliamps here across the heart.

369

00:21:21,560 --> 00:21:25,320

This one is dead as a dodo, well over the threshold.

370

00:21:25,320 --> 00:21:27,960

All right, shall we power down?

371

00:21:27,960 --> 00:21:30,200

So Adam was way off.

372

00:21:30,200 --> 00:21:35,640

Forget seventy milliamps, just six milliamps fizzing through a body is enough to cause

373

00:21:35,640 --> 00:21:40,440

loss of muscular control, making it impossible to get out of the bath.

374

00:21:40,440 --> 00:21:42,440

Next up, toaster.

375

00:21:49,440 --> 00:21:51,440

Smell the danger.

376

00:21:51,440 --> 00:21:53,440

All right, you ready?

377

00:21:53,440 --> 00:21:54,440

Recording.

378

00:21:54,440 --> 00:22:00,440

Okay, pulling in three, two, one.

379

00:22:04,440 --> 00:22:08,440

Whoa, our friend here is toast.

380

00:22:08,440 --> 00:22:11,440

Oh yeah, twelve milliamps.

381

00:22:11,440 --> 00:22:14,440

That's very lethal, totally lethal.

382

00:22:14,440 --> 00:22:16,440

Toasters, no good.

383

00:22:16,440 --> 00:22:20,440

Next item, one of my personal favorites, the curling egg.

384

00:22:20,440 --> 00:22:21,440

Let's go.

385

00:22:21,440 --> 00:22:24,440

What are you, peewee, harmony?

386

00:22:24,440 --> 00:22:29,440

Here we go, three, two, one.

387

00:22:31,440 --> 00:22:34,440

Four and a half, it's going to be really uncomfortable.

388

00:22:34,440 --> 00:22:37,440

I think you got out of the bath by now.

389

00:22:37,440 --> 00:22:38,440

You think you can?

390

00:22:38,440 --> 00:22:42,440

Don't forget, we've got four and a half milliamps at the heart.

391

00:22:42,440 --> 00:22:48,440

It means the rest of your body is going to be like, lethal dose is six milliamps, but four and a half's got to suck.

392

00:22:48,440 --> 00:22:51,440

Four and a half milliamps, it's a little close for comfort.

393

00:22:51,440 --> 00:22:54,440

I think I wouldn't want to be in there with that.

394

00:22:54,440 --> 00:22:59,440

And now the iron, or as we refer to it around here, fiero de los muertos.

395

00:22:59,440 --> 00:23:12,440

Wow, that's the highest spike yet.

396

00:23:12,440 --> 00:23:14,440

We've got thirty-two milliamps.

397

00:23:14,440 --> 00:23:17,440

This thing is literally pumping death into our subject here.

398

00:23:17,440 --> 00:23:22,440

Thirty-two milliamps, that's more than five times the lethal limit.

399

00:23:22,440 --> 00:23:26,440

Items that had large heating elements are delivering a lot more current,

400

00:23:26,440 --> 00:23:31,440

and that's specifically because a heating element is basically a modified short across wire,

401

00:23:31,440 --> 00:23:34,440

so it's a lot of exposure to the water.

402

00:23:34,440 --> 00:23:39,440

The Mythbusters also discovered that if the appliance lands closer to the metal drain,

403

00:23:39,440 --> 00:23:45,440

the dose of electricity is drastically reduced because the current has less distance to travel.

404

00:23:45,440 --> 00:23:47,440

We know that you can be electrocuted.

405

00:23:47,440 --> 00:23:52,440

Now we'd like to find out what would happen if you added something like bubble bath to the water.

406

00:23:52,440 --> 00:23:59,440

Will the water's conductivity be changed?

407

00:23:59,440 --> 00:24:01,440

No, that's not as much as it was last time.

408

00:24:01,440 --> 00:24:03,440

It's only about eleven milliamps.

409

00:24:03,440 --> 00:24:05,440

Last time it was eighteen, I believe.

410

00:24:05,440 --> 00:24:07,440

The subsets don't help it at all.

411

00:24:07,440 --> 00:24:10,440

In fact, it seems like it cut it down.

412

00:24:10,440 --> 00:24:14,440

Next up we're going to try two hundred mils of fake urine in the bath.

413

00:24:14,440 --> 00:24:19,440

Our urine is just water with salt and food dye added.

414

00:24:19,440 --> 00:24:25,440

Fake weed test in three, two, one.

415

00:24:25,440 --> 00:24:29,440

Well that's got it. It's just right in the death zone.

416

00:24:29,440 --> 00:24:31,440

And finally, epsom salts.

417

00:24:31,440 --> 00:24:36,440

Remember, salt normally increases water's conductivity.

418

00:24:36,440 --> 00:24:39,440

Big spike. Wow!

419

00:24:39,440 --> 00:24:41,440

That was over an amp. That'd be huge.

420

00:24:41,440 --> 00:24:43,440

You'd be toast.

421

00:24:43,440 --> 00:24:45,440

You'd fry. You'd boil.

422

00:24:45,440 --> 00:24:48,440

This from the guy who thought nothing would happen.

423

00:24:48,440 --> 00:24:50,440

I really like this one. We learned a lot on this.

424

00:24:50,440 --> 00:24:53,440

You can definitely dye if you drop an appliance into the tub.

425

00:24:53,440 --> 00:24:54,440

Oh, absolutely.

426

00:24:54,440 --> 00:24:59,440

Surprisingly, it actually turns out that the location of where the appliance falls in the bath

427

00:24:59,440 --> 00:25:02,440

really has a strong effect on the severity of the shock you'd get.

428

00:25:02,440 --> 00:25:05,440

And what's in the water will determine how quickly you dye.

429

00:25:05,440 --> 00:25:08,440

Everyone will always want to know if we're just busing myths

430

00:25:08,440 --> 00:25:10,440

or if we're actually confirming them in this one.

431

00:25:10,440 --> 00:25:12,440

Hundred percent confirmed.

432

00:25:12,440 --> 00:25:14,440

Yeah, we're done.

433

00:25:15,440 --> 00:25:20,440

The MythBusters are trying to create quicksand.

434

00:25:20,440 --> 00:25:23,440

Not ordinary quicksand, killer quicksand.

435

00:25:23,440 --> 00:25:26,440

Stuff that'll suck you right under.

436

00:25:26,440 --> 00:25:28,440

I'm pretty sure it's going to work.

437

00:25:28,440 --> 00:25:30,440

It's just a question of how well.

438

00:25:30,440 --> 00:25:32,440

Because while I know that we can sink in there,

439

00:25:32,440 --> 00:25:34,440

I don't know how fast we're going to get it.

440

00:25:34,440 --> 00:25:36,440

The ideal would be to get so you plumb it in there,

441

00:25:36,440 --> 00:25:38,440

but then you get stuck.

442

00:25:38,440 --> 00:25:43,440

But this one, the guys are going to need one mighty big bucket.

443

00:25:44,440 --> 00:25:47,440

Whoa, stop!

444

00:25:47,440 --> 00:25:53,440

This 2,000 gallon tank has played a starring role before on MythBusters.

445

00:25:53,440 --> 00:25:57,440

Hey Adam, did you hear the guy tell us what this was for?

446

00:25:57,440 --> 00:25:58,440

What was it for?

447

00:25:58,440 --> 00:26:00,440

It was like a fecal matter.

448

00:26:00,440 --> 00:26:07,440

So I'm going to cut this tank down to just over eight feet from the inside.

449

00:26:13,440 --> 00:26:25,440

That was really sad, right?

450

00:26:29,440 --> 00:26:32,440

These gauze holes will actually allow water to get out,

451

00:26:32,440 --> 00:26:34,440

but keep the sand inside.

452

00:26:34,440 --> 00:26:37,440

And that'll make the top of our quicksand not like a slurry,

453

00:26:37,440 --> 00:26:39,440

but actually look more like sand,

454

00:26:39,440 --> 00:26:43,440

so it's more realistic to what people think of quicksand looking like.

455

00:26:43,440 --> 00:26:47,440

Meanwhile, Jamie and Christine start work on the diffuser.

456

00:26:47,440 --> 00:26:50,440

The gauze will let water rise into the tank,

457

00:26:50,440 --> 00:26:53,440

but stop sand from flowing back into the pump.

458

00:26:53,440 --> 00:26:56,440

So what we've got is huge six foot tanks, about eight feet high.

459

00:26:56,440 --> 00:27:02,440

We're going to feed water up through this diffuser into seven feet of sand.

460

00:27:02,440 --> 00:27:05,440

And when we get that water to flow at the right rate,

461

00:27:05,440 --> 00:27:07,440

what we should end up with is quicksand.

462

00:27:07,440 --> 00:27:11,440

Our task is not only to build quicksand, but killer quicksand.

463

00:27:11,440 --> 00:27:14,440

And I have my doubts that we'll be able to do this,

464

00:27:14,440 --> 00:27:18,440

because when you start to think about what's involved,

465

00:27:18,440 --> 00:27:22,440

the sand actually makes it harder for you to drown in it,

466

00:27:22,440 --> 00:27:25,440

because it's in effect making the water more dense.

467

00:27:25,440 --> 00:27:29,440

Water with sand in it is heavier than water without sand in it.

468

00:27:29,440 --> 00:27:31,440

Hence you're going to be more buoyant.

469

00:27:32,440 --> 00:27:39,440

This pool will serve as the catch basin and reciprocating tank for our quicksand rig.

470

00:27:48,440 --> 00:27:51,440

You're looking good. Another foot.

471

00:27:52,440 --> 00:27:54,440

Alright, that ought to do it.

472

00:27:55,440 --> 00:27:56,440

Yeah!

473

00:27:56,440 --> 00:27:58,440

The tank's in position.

474

00:27:58,440 --> 00:27:59,440

Aw, that's beautiful.

475

00:27:59,440 --> 00:28:01,440

It's time to fill the pool.

476

00:28:01,440 --> 00:28:05,440

And that's when the quicksand experiment gets a little sticky.

477

00:28:05,440 --> 00:28:06,440

Crank it all the way.

478

00:28:06,440 --> 00:28:10,440

Adam wants to call in a fire hose and get the job done quickly.

479

00:28:10,440 --> 00:28:15,440

That means getting permission to use a hydrant, phone calls, probably some expense.

480

00:28:15,440 --> 00:28:18,440

But Jamie's happy to use his garden hose.

481

00:28:18,440 --> 00:28:21,440

It's a little under 30 seconds for five gallons.

482

00:28:21,440 --> 00:28:24,440

Alright, which means 10 gallons a minute.

483

00:28:24,440 --> 00:28:28,440

So 10 minutes is 100 gallons, 1000 gallons is 100 minutes,

484

00:28:28,440 --> 00:28:31,440

2000 gallons is 200 minutes.

485

00:28:31,440 --> 00:28:34,440

It's just over three hours to fill that tank,

486

00:28:34,440 --> 00:28:38,440

and then another probably hour or two to get that pool.

487

00:28:38,440 --> 00:28:40,440

So it's five hours of filling.

488

00:28:41,440 --> 00:28:44,440

That's as opposed to doing the fire hose where it's like four minutes.

489

00:28:44,440 --> 00:28:45,440

Three hours and 20 minutes.

490

00:28:45,440 --> 00:28:47,440

His partner won't budge.

491

00:28:47,440 --> 00:28:50,440

Under that beret is one stubborn myth buster.

492

00:28:50,440 --> 00:28:55,440

We can continue to not err on the side of caution and just waste time because you're cheap.

493

00:28:55,440 --> 00:28:59,440

I'm just expressing my opinion and I'm not giving you that your opinion.

494

00:28:59,440 --> 00:29:01,440

I'm just saying, I think it's...

495

00:29:01,440 --> 00:29:02,440

You can give me about every one of my opinions.

496

00:29:02,440 --> 00:29:04,440

Every last single one of them.

497

00:29:04,440 --> 00:29:08,440

You have a different one and you talk until I can't stand to hear you talk anymore

498

00:29:08,440 --> 00:29:09,440

and then we go with your idea.

499

00:29:09,440 --> 00:29:13,440

Baby, now I got to listen to your whine about it all the time.

500

00:29:13,440 --> 00:29:16,440

And the whole time it's filling, it's like...

501

00:29:16,440 --> 00:29:19,440

I like to do things efficiently and kind of fast.

502

00:29:19,440 --> 00:29:24,440

And Damien is always looking for the kind of lowest amount of...

503

00:29:24,440 --> 00:29:26,440

I don't even know how to describe it.

504

00:29:26,440 --> 00:29:28,440

It's just like the least amount of effort involved.

505

00:29:28,440 --> 00:29:31,440

So he wants to go with just the garden hose where I like to go with the fire hose.

506

00:29:31,440 --> 00:29:35,440

The fire hose, I know the whole thing is full inside of like 15, 20 minutes, you know?

507

00:29:35,440 --> 00:29:39,440

But the garden hose is going to take several hours.

508

00:29:39,440 --> 00:29:41,440

But there's no time for tantrums.

509

00:29:41,440 --> 00:29:43,440

I'm going to go turn on the water.

510

00:29:43,440 --> 00:29:47,440

Twenty thousand pounds of sand have just arrived.

511

00:29:47,440 --> 00:29:49,440

That's a lot of sand!

512

00:29:49,440 --> 00:29:54,440

Along with an engineering geologist who knows plenty about quick sand.

513

00:29:54,440 --> 00:29:58,440

More easily forms in a situation where you have very fine sand.

514

00:29:58,440 --> 00:30:01,440

In fact, geologists sometimes call it sugar sand.

515

00:30:01,440 --> 00:30:04,440

So most of your quick sand is in really fine-grained sand.

516

00:30:04,440 --> 00:30:08,440

So Tom, the twenty thousand pounds of sand we've got here, is this great for quick sand?

517

00:30:08,440 --> 00:30:10,440

Oh, this is great.

518

00:30:10,440 --> 00:30:15,440

This is probably as good as it gets because it's very fine-grained and it'll...

519

00:30:15,440 --> 00:30:19,440

There's so much surface area here that when the water flows through it

520

00:30:19,440 --> 00:30:23,440

it means the water can grab onto that and that'll create the quick condition.

521

00:30:23,440 --> 00:30:28,440

This irrigation pump can move up to fourteen hundred gallons of water a minute.

522

00:30:28,440 --> 00:30:31,440

But if it stops while Adam and Jamie are in the quick sand,

523

00:30:31,440 --> 00:30:34,440

the sand will suddenly compact.

524

00:30:34,440 --> 00:30:38,440

And the mythbusters will have some pressing problems.

525

00:30:38,440 --> 00:30:42,440

Adam and Jamie are suddenly facing danger on two fronts.

526

00:30:42,440 --> 00:30:46,440

On one hand, the guys could be sucked under by killer quick sand.

527

00:30:46,440 --> 00:30:48,440

Or they could be crushed.

528

00:30:48,440 --> 00:30:53,440

Tom's pointing out quite realistically that if the pump stops during the experiment

529

00:30:53,440 --> 00:30:57,440

we could die because we'll be encased in twenty thousand pounds of sand.

530

00:30:57,440 --> 00:31:00,440

And we'll be able to get to the bottom of the water.

531

00:31:00,440 --> 00:31:04,440

And if we're able to die because we'll be encased in twenty thousand pounds of sand

532

00:31:04,440 --> 00:31:06,440

it's cause for real concern.

533

00:31:06,440 --> 00:31:10,440

Before I talk to Tom, I wasn't that concerned about going into the quick sand.

534

00:31:10,440 --> 00:31:14,440

But I think he has a good point and we should be careful with this.

535

00:31:14,440 --> 00:31:18,440

We'll leave Adam and Jamie to ponder their fine-grained fate.

536

00:31:22,440 --> 00:31:27,440

There are a host of medical related myths swirling around cyberspace.

537

00:31:27,440 --> 00:31:32,440

Remember the government mind control chips being placed in the arms of blood donors?

538

00:31:32,440 --> 00:31:33,440

Little sting, here we go.

539

00:31:33,440 --> 00:31:39,440

When Adam and Jamie busted that one, it was a shot in the arm for science and common sense.

540

00:31:39,440 --> 00:31:43,440

I don't notice anything at all. I feel perfectly normal now.

541

00:31:43,440 --> 00:31:48,440

Now the build team have got another myth that'll really get under your skin.

542

00:31:52,440 --> 00:31:56,440

You guys are gonna love this one. Our next bit is called the exploding tattoo.

543

00:31:56,440 --> 00:32:01,440

Apparently the myth goes that if you have some sort of decorative tattoo and go into an MRI,

544

00:32:01,440 --> 00:32:03,440

the tattoo explodes.

545

00:32:03,440 --> 00:32:05,440

Are you worried?

546

00:32:05,440 --> 00:32:09,440

Well, I'm assuming that you guys are going to put me into an MRI.

547

00:32:09,440 --> 00:32:12,440

Let's outline the situation.

548

00:32:12,440 --> 00:32:18,440

Tattoo ink, especially ink used more than twenty years ago, contains traces of metal.

549

00:32:18,440 --> 00:32:24,440

A magnetic resonance imager, or MRI, is basically a powerful magnet,

550

00:32:24,440 --> 00:32:29,440

with a force at least thirty thousand times greater than the Earth's magnetic field.

551

00:32:29,440 --> 00:32:35,440

When metal fragments in the tattoo meet the MRI magnet, so the story goes,

552

00:32:35,440 --> 00:32:40,440

the result is a lot more painful than actually getting the tattoo in the first place.

553

00:32:40,440 --> 00:32:42,440

So are you going to get an MRI?

554

00:32:42,440 --> 00:32:43,440

No.

555

00:32:43,440 --> 00:32:44,440

No?

556

00:32:44,440 --> 00:32:48,440

You understand that the job on Mythbusters is to put your body to the test,

557

00:32:48,440 --> 00:32:53,440

and being the one with the tattoos, I think you need to go at least have an MRI on your arm.

558

00:32:53,440 --> 00:32:58,440

Come on, Scotty. Adam and Jamie are about to throw themselves into quicksand.

559

00:32:58,440 --> 00:33:02,440

The least you could do is stick your inked-up arm in an MRI.

560

00:33:02,440 --> 00:33:04,440

After all, it is for science.

561

00:33:15,440 --> 00:33:17,440

My ghost dog.

562

00:33:17,440 --> 00:33:19,440

I think she actually looks scared.

563

00:33:19,440 --> 00:33:21,440

She looks cute in a nightgown.

564

00:33:23,440 --> 00:33:30,440

Staff here have heard the exploding tattoo story, but don't think Scotty will wind up ink-capacitated.

565

00:33:30,440 --> 00:33:37,440

One or two patients out of a hundred who have a tattoo and an ND L MRI scan to have a reaction,

566

00:33:37,440 --> 00:33:40,440

but the reactions that have been described are all minor,

567

00:33:40,440 --> 00:33:44,440

consisting of a little bit of discomfort or some redness at the tattoo,

568

00:33:44,440 --> 00:33:47,440

but nobody has described exploding tattoos.

569

00:33:47,440 --> 00:33:53,440

Do you think it's possible that the magnetic field is inducing some sort of current in the pigments or in the material in the tattoo?

570

00:33:53,440 --> 00:33:59,440

It's possible, but it seems unlikely because usually to get induced currents,

571

00:33:59,440 --> 00:34:02,440

you need lengths of wire or loops,

572

00:34:02,440 --> 00:34:07,440

so it's hard to see how these tiny particles could have currents induced in them,

573

00:34:07,440 --> 00:34:10,440

but nobody could say it's not happening for sure.

574

00:34:10,440 --> 00:34:12,440

Are you okay?

575

00:34:17,440 --> 00:34:20,440

What's that smell? It smells like sizzling bacon.

576

00:34:20,440 --> 00:34:23,440

At the first sign of trouble, the scan will be stopped.

577

00:34:23,440 --> 00:34:26,440

Looks like a T-bone steak.

578

00:34:26,440 --> 00:34:27,440

Yeah.

579

00:34:27,440 --> 00:34:32,440

An MRI scan targets the body's billions of hydrogen atoms.

580

00:34:32,440 --> 00:34:38,440

The atoms line up with the strong magnetic field and are then bombarded by radio waves.

581

00:34:38,440 --> 00:34:43,440

The radio waves are absorbed by the atoms and the resulting signal sent to a computer,

582

00:34:43,440 --> 00:34:46,440

which turns the data into a 2D image.

583

00:34:46,440 --> 00:34:48,440

Is there any distortion in the image or sign of the tattoo?

584

00:34:48,440 --> 00:34:49,440

No.

585

00:34:49,440 --> 00:34:52,440

Scotty's arm full of ink is still intact.

586

00:34:52,440 --> 00:34:56,440

No pain, no discomfort, no explosion.

587

00:34:56,440 --> 00:34:58,440

No, you're looking alright.

588

00:34:58,440 --> 00:35:02,440

But of course, the tattoo myth ain't busted yet.

589

00:35:02,440 --> 00:35:05,440

The build teams barely scratch the surface.

590

00:35:08,440 --> 00:35:10,440

We stopped to bust this myth.

591

00:35:10,440 --> 00:35:12,440

It looks like we're going to have to do some experiments.

592

00:35:12,440 --> 00:35:15,440

We're going to have to get the compounds that go into all of these pigments

593

00:35:15,440 --> 00:35:19,440

and test them individually to find out what could cause any sort of irritation or explosion.

594

00:35:19,440 --> 00:35:22,440

So what goes into tattooing?

595

00:35:22,440 --> 00:35:25,440

The pigments are a pulpouirri of chemical compound,

596

00:35:25,440 --> 00:35:30,440

including iron oxide, zinc oxide, and titanium dioxide.

597

00:35:30,440 --> 00:35:34,440

So the theory is, is the metallic components that are used in tattoo pigments

598

00:35:34,440 --> 00:35:37,440

have been having some reactions with the MRI magnetic field.

599

00:35:37,440 --> 00:35:40,440

So what we have here are a couple of those components.

600

00:35:40,440 --> 00:35:44,440

We have iron oxide, we have the copper and the zinc and the mercury.

601

00:35:44,440 --> 00:35:47,440

So what we're going to do is we're going to try to expose some of these materials

602

00:35:47,440 --> 00:35:49,440

to a strong electromagnetic field.

603

00:35:49,440 --> 00:35:52,440

We can see if the pigments line up with the magnetic field.

604

00:35:52,440 --> 00:35:56,440

Secondly, if the theory is that there's sort of a current being induced,

605

00:35:56,440 --> 00:35:58,440

we have a voltmeter to check for that.

606

00:35:58,440 --> 00:36:03,440

And of course, if the pigments are creating some sort of excitation in the skin

607

00:36:03,440 --> 00:36:07,440

and heating it, we have a thermometer to check and see if there's any temperature difference.

608

00:36:07,440 --> 00:36:09,440

Which compound is the culprit?

609

00:36:09,440 --> 00:36:11,440

One by one, they're tested.

610

00:36:11,440 --> 00:36:12,440

Yay.

611

00:36:13,440 --> 00:36:15,440

Copper and zinc.

612

00:36:22,440 --> 00:36:24,440

Iron oxide.

613

00:36:24,440 --> 00:36:26,440

Iron oxide.

614

00:36:26,440 --> 00:36:30,440

But only one iron oxide reacts to the magnetic field.

615

00:36:30,440 --> 00:36:34,440

After all of that testing, it looks like iron oxide is definitely the culprit here.

616

00:36:34,440 --> 00:36:37,440

I mean, you could see it just moving over the magnetic field.

617

00:36:37,440 --> 00:36:38,440

It would line up.

618

00:36:38,440 --> 00:36:40,440

Well, we still need to make a tattoo explode.

619

00:36:40,440 --> 00:36:44,440

So what I'm thinking is we'll make our own ink, mix in some iron oxide,

620

00:36:44,440 --> 00:36:46,440

make it a thick batch, and then tattoo someone.

621

00:36:46,440 --> 00:36:48,440

I figured you'd be the good person to try it on.

622

00:36:48,440 --> 00:36:50,440

No. No. No.

623

00:36:50,440 --> 00:36:52,440

No. No. No.

624

00:36:55,440 --> 00:37:00,440

The junior mythbusters are trying to make tattoo ink that will explode in an MRI.

625

00:37:00,440 --> 00:37:05,440

They're going shopping for art supplies at the Butchers.

626

00:37:05,440 --> 00:37:06,440

We need some pork.

627

00:37:06,440 --> 00:37:07,440

Pork?

628

00:37:07,440 --> 00:37:09,440

Yeah, but it has to have the skin left on it.

629

00:37:09,440 --> 00:37:10,440

Okay.

630

00:37:10,440 --> 00:37:11,440

Oh, look at that.

631

00:37:11,440 --> 00:37:12,440

Beautiful.

632

00:37:12,440 --> 00:37:13,440

We even have the meat off the skin.

633

00:37:13,440 --> 00:37:15,440

So what's it going to be, the leg or the belly?

634

00:37:15,440 --> 00:37:17,440

Don't ask me, I'm a vegetarian.

635

00:37:17,440 --> 00:37:19,440

I would say we should go with the belly.

636

00:37:19,440 --> 00:37:22,440

I mean, it's like a nice big canvas that we can draw.

637

00:37:22,440 --> 00:37:25,440

It's probably a little more tender as well.

638

00:37:25,440 --> 00:37:27,440

Hey, look, it still has little hairs on it.

639

00:37:31,440 --> 00:37:35,440

This is my old friend, Maddie, and he is responsible for the new ink on my arm.

640

00:37:35,440 --> 00:37:36,440

Welcome, Maddie.

641

00:37:36,440 --> 00:37:37,440

How you doing?

642

00:37:37,440 --> 00:37:38,440

How you doing?

643

00:37:38,440 --> 00:37:39,440

Nice to meet you.

644

00:37:39,440 --> 00:37:40,440

Nice to meet you too.

645

00:37:40,440 --> 00:37:41,440

And he's here today.

646

00:37:41,440 --> 00:37:43,440

He's going to show us how to tattoo on our pig.

647

00:37:43,440 --> 00:37:44,440

All right.

648

00:37:44,440 --> 00:37:45,440

Hey, Maddie.

649

00:37:45,440 --> 00:37:46,440

Hey, Maddie.

650

00:37:47,440 --> 00:37:49,440

Hey, Maddie, have you ever tattooed a pig before?

651

00:37:49,440 --> 00:37:51,440

No, I never tattooed a pig.

652

00:37:51,440 --> 00:37:57,440

I was told to try pig ears when I was learning how to tattoo, but I never tried a pig.

653

00:37:57,440 --> 00:37:58,440

I used my own leg.

654

00:37:58,440 --> 00:38:01,440

Maddie's heard the MRI myth too.

655

00:38:01,440 --> 00:38:07,440

I don't think that it's true because I would hear a lot more about people coming back to

656

00:38:07,440 --> 00:38:10,440

the tattoo parlors and being like, what happened to my tattoo?

657

00:38:10,440 --> 00:38:15,440

But I've never heard anybody come into a tattoo parlour and say, I went and got an MRI and

658

00:38:15,440 --> 00:38:16,440

my tattoo exploded.

659

00:38:16,440 --> 00:38:19,440

You know, I think that would be pretty big news.

660

00:38:19,440 --> 00:38:21,440

The pork is cut into portions.

661

00:38:21,440 --> 00:38:27,440

Maddie will use two different inks, a regular tattooing pigment and a special brew full

662

00:38:27,440 --> 00:38:32,440

of iron oxide, the one compound that reacted to the electromagnet.

663

00:38:32,440 --> 00:38:35,440

Maddie, here's the ultrametallic pigment.

664

00:38:35,440 --> 00:38:36,440

Check it out.

665

00:38:36,440 --> 00:38:39,440

See if you think the consistency is good enough.

666

00:38:39,440 --> 00:38:43,440

Yeah, I think that's pretty good.

667

00:38:43,440 --> 00:38:47,440

Right, it's time to get some pigment into this pig.

668

00:38:55,440 --> 00:38:57,440

It's kind of gross.

669

00:38:57,440 --> 00:38:59,440

You're not getting near my arm.

670

00:38:59,440 --> 00:39:00,440

Yeah.

671

00:39:00,440 --> 00:39:02,440

You're not getting near me with that thing.

672

00:39:02,440 --> 00:39:06,440

Carrie, it might be safer if you stick to felt tip.

673

00:39:06,440 --> 00:39:08,440

Let's see if there's any change.

674

00:39:08,440 --> 00:39:10,440

Careful, you've cracked parts and stuff again.

675

00:39:10,440 --> 00:39:14,440

Oh yeah, oh yeah, look at that.

676

00:39:14,440 --> 00:39:18,440

I have bobby pins and I can feel that too.

677

00:39:21,440 --> 00:39:28,440

Back at the MRI machine, the super iron oxide ink takes on a life of its own.

678

00:39:28,440 --> 00:39:32,440

The container is suddenly sucked right into the core.

679

00:39:36,440 --> 00:39:37,440

Is that ink going to work?

680

00:39:37,440 --> 00:39:38,440

Yeah, that ain't going to work.

681

00:39:38,440 --> 00:39:39,440

That was completely nutty.

682

00:39:39,440 --> 00:39:42,440

The iron oxide got completely sucked into the magnet.

683

00:39:42,440 --> 00:39:44,440

Yeah, the box flew right off.

684

00:39:44,440 --> 00:39:47,440

That was pretty cool.

685

00:39:47,440 --> 00:39:49,440

Thank goodness we taped the top.

686

00:39:49,440 --> 00:39:53,440

Otherwise, I don't think they'd let us come back.

687

00:39:53,440 --> 00:39:56,440

The pork bellies are primed for scanning.

688

00:39:56,440 --> 00:40:02,440

Okay, so this is our special myth busters super iron oxide ink.

689

00:40:02,440 --> 00:40:05,440

So if anyone's going to explode, it's going to be this one.

690

00:40:05,440 --> 00:40:07,440

There's a glitch on the image.

691

00:40:07,440 --> 00:40:11,440

The heavy iron oxide content seems to be having an effect.

692

00:40:11,440 --> 00:40:15,440

So you think that what we tattooed is actually making an interference on your scan?

693

00:40:15,440 --> 00:40:16,440

Definitely.

694

00:40:16,440 --> 00:40:18,440

But it's not explosive.

695

00:40:18,440 --> 00:40:23,440

Well, it didn't explode, so go ahead and blot it and see if any of the pigments came up.

696

00:40:26,440 --> 00:40:31,440

No, no pigment has been pulled to the surface.

697

00:40:31,440 --> 00:40:35,440

All right, so next one we're going to do is the traditional iron oxide.

698

00:40:35,440 --> 00:40:38,440

What you normally find in a regular tattoo parlor.

699

00:40:38,440 --> 00:40:45,440

The iron oxide in the regular ink also interferes with the scan, but the effect is much smaller.

700

00:40:45,440 --> 00:40:53,440

But in the end, Scotty, Tori and Carrie are left with chunks of unexploded tattooed pork.

701

00:40:53,440 --> 00:40:56,440

All right, Scotty, exploding tattoos, tell us what you came up with.

702

00:40:56,440 --> 00:40:59,440

Well, clearly iron oxide is the culprit here.

703

00:40:59,440 --> 00:41:04,440

Iron oxide definitely reacts to magnetic field, and it's very common in a lot of tattoo inks.

704

00:41:04,440 --> 00:41:07,440

But at most it's going to cause heating.

705

00:41:07,440 --> 00:41:12,440

There was one case of a blister with the operators that we talked to, but it's not going to explode.

706

00:41:12,440 --> 00:41:15,440

So you're telling us there was no exploding tattoo?

707

00:41:15,440 --> 00:41:19,440

No, Jamie, I know that disappoints you, but I'm a little relieved about that.

708

00:41:19,440 --> 00:41:21,440

So myth confirmed, plausible?

709

00:41:21,440 --> 00:41:24,440

Myth busted, I'm saying.

710

00:41:30,440 --> 00:41:33,440

Myth Busters

711

00:41:33,440 --> 00:41:37,440

The Myth Busters killer quick sand rigs almost ready.

712

00:41:37,440 --> 00:41:38,440

Push up, push up.

713

00:41:38,440 --> 00:41:40,440

My foot was stuck under it, sorry.

714

00:41:40,440 --> 00:41:46,440

Well, you know, we make this stuff up as we go, and it's always surprising when it actually works like we thought it would.

715

00:41:46,440 --> 00:41:49,440

And that's kind of the way this looks like it's doing.

716

00:41:49,440 --> 00:41:51,440

Everything's coming together relatively quickly.

717

00:41:51,440 --> 00:41:53,440

Very good.

718

00:41:53,440 --> 00:41:56,440

Oh, look at that, that's beautiful.

719

00:41:56,440 --> 00:41:58,440

Just gotta hope it works.

720

00:41:58,440 --> 00:42:09,440

If this valve right here failed, the pump would cease to put water into the tank and our sand would become a deadly solid mass of sand that we would be in.

721

00:42:12,440 --> 00:42:18,440

There's nothing like a huge piece of earth-moving equipment to bring out the boy in Adam.

722

00:42:24,440 --> 00:42:26,440

You're good.

723

00:42:27,440 --> 00:42:28,440

Stop.

724

00:42:28,440 --> 00:42:30,440

Well, how about that?

725

00:42:30,440 --> 00:42:34,440

Now I gotta figure out how we're gonna get at that underside.

726

00:42:34,440 --> 00:42:37,440

That's pretty scary letting it go all at once.

727

00:42:39,440 --> 00:42:40,440

There she goes.

728

00:42:40,440 --> 00:42:41,440

Really?

729

00:42:41,440 --> 00:42:42,440

Yeah.

730

00:42:43,440 --> 00:42:45,440

Wow, look at the bag drain.

731

00:42:47,440 --> 00:42:49,440

Oh, that is so cool.

732

00:42:52,440 --> 00:42:54,440

What do you think?

733

00:42:57,440 --> 00:42:59,440

I got my own island.

734

00:43:01,440 --> 00:43:06,440

Alright, well the tank is full of sand and water, and we're sorta primed.

735

00:43:06,440 --> 00:43:10,440

Well, let's turn on the pump and start getting some hydration to the sand.

736

00:43:12,440 --> 00:43:13,440

Wow, Jamie.

737

00:43:16,440 --> 00:43:18,440

No problem at all, man.

738

00:43:18,440 --> 00:43:20,440

It's going right away.

739

00:43:20,440 --> 00:43:23,440

Jamie, I believe we have quick sand here.

740

00:43:23,440 --> 00:43:27,440

Now Adam and Jamie were planning on having a nice sandy surface,

741

00:43:27,440 --> 00:43:31,440

but what they've got is a quagmire and a quandary.

742

00:43:31,440 --> 00:43:35,440

Unfortunately our outlet ports aren't letting the water out nearly fast enough.

743

00:43:36,440 --> 00:43:43,440

These ports up here that I've put in are supposed to let water out before it reaches over the top of the sand

744

00:43:43,440 --> 00:43:47,440

so that it can look like a sandy beach and then all of a sudden it turns into quick sand.

745

00:43:47,440 --> 00:43:51,440

Unfortunately the sand is so fine, it's clogging up those ports

746

00:43:51,440 --> 00:43:54,440

and the water is just going up and over it.

747

00:43:54,440 --> 00:43:57,440

The rig is working, everything is working exactly as planned.

748

00:43:57,440 --> 00:44:02,440

We just need to figure out how to filter the sand a little better to get something that looks good.

749

00:44:05,440 --> 00:44:11,440

We've put in some cotton batting, which is like stuffing for stuffed animals or actually for quilts.

750

00:44:11,440 --> 00:44:15,440

And hopefully the larger surface area of that will allow more water to flow through

751

00:44:15,440 --> 00:44:18,440

while still holding back the sand, so we're just about to try it.

752

00:44:18,440 --> 00:44:20,440

Yeah, it seems okay.

753

00:44:20,440 --> 00:44:22,440

Let's get more sand in.

754

00:44:22,440 --> 00:44:28,440

Meanwhile, Christine's managed to finish the hydrometer without destroying Jamie's workshop.

755

00:44:28,440 --> 00:44:33,440

This hydrometer will give us a reading on this water and will tell us if we put it in the quick sand

756

00:44:33,440 --> 00:44:36,440

whether it is more or less dense than this water.

757

00:44:37,440 --> 00:44:41,440

The hydrometer floats in the water and its buoyancy level is marked.

758

00:44:41,440 --> 00:44:43,440

Then it's dunked in the tank.

759

00:44:43,440 --> 00:44:44,440

It's floating.

760

00:44:44,440 --> 00:44:49,440

That just shows really nicely that the water sand mixture is a lot more dense than water.

761

00:44:49,440 --> 00:44:52,440

This is why it would be if it was H₂O.

762

00:44:53,440 --> 00:44:58,440

So in theory, a person will float better in quick sand than normal water.

763

00:45:00,440 --> 00:45:04,440

The killer quick sand myth is on shaky ground.

764

00:45:04,440 --> 00:45:06,440

We have several escape techniques.

765

00:45:06,440 --> 00:45:11,440

First and foremost, we have whatever we would want if they were near quick sand is a vine.

766

00:45:12,440 --> 00:45:17,440

Secondly, we have a walking stick, which is often recommended in the literature we've read about quick sand

767

00:45:17,440 --> 00:45:20,440

is a helpful tool for getting out of quick sand.

768

00:45:21,440 --> 00:45:26,440

Third is a bar, which we can throw across the top of the tank, which I should be able to hold on to

769

00:45:26,440 --> 00:45:28,440

in case I get really desperate.

770

00:45:28,440 --> 00:45:32,440

At that point, I'll be making those sounds that you just don't make when you're kidding.

771

00:45:32,440 --> 00:45:35,440

Worst case scenario is that Adam dies.

772

00:45:38,440 --> 00:45:40,440

Of course, we don't want to see that happen.

773

00:45:40,440 --> 00:45:42,440

I'd hate to have to hunt for another co-host.

774

00:45:43,440 --> 00:45:48,440

But we've got all the precautions that we can think of reasonably to have on this.

775

00:45:48,440 --> 00:45:53,440

And I'm fairly sure that he'll be okay one way or another.

776

00:45:53,440 --> 00:45:58,440

The pith helmet is always a good technique for finding someone who is drowned in quick sand

777

00:45:58,440 --> 00:46:00,440

because it will be floating on the surface there.

778

00:46:05,440 --> 00:46:07,440

Oh, look at the white sandy beach.

779

00:46:07,440 --> 00:46:09,440

I don't feel any danger at all.

780

00:46:10,440 --> 00:46:12,440

You will, Adam. You will.

781

00:46:13,440 --> 00:46:15,440

The pump switched on.

782

00:46:15,440 --> 00:46:17,440

Water begins to rise through the sand.

783

00:46:19,440 --> 00:46:24,440

As liquefaction occurs, Adam gets that sinking feeling.

784

00:46:24,440 --> 00:46:27,440

You know, it feels more dangerous now than I thought.

785

00:46:30,440 --> 00:46:31,440

Whoa!

786

00:46:32,440 --> 00:46:33,440

Let's go!

787

00:46:34,440 --> 00:46:36,440

Well, I started going down really slowly.

788

00:46:36,440 --> 00:46:39,440

Then when the water got up to my chest in the sand and water mixture,

789

00:46:39,440 --> 00:46:43,440

I kind of felt where I hit my buoyant point, which was just probably right about here.

790

00:46:43,440 --> 00:46:48,440

Now we've turned the pump off, and I'll tell you, I'm not going to be able to get back out of here

791

00:46:48,440 --> 00:46:50,440

until we turn the pump back on.

792

00:46:50,440 --> 00:46:55,440

Adam is far less dense than the quick sand, and so he's suspended.

793

00:46:55,440 --> 00:47:00,440

I think we've created a very realistic scenario for a worst case scenario quick sand.

794

00:47:00,440 --> 00:47:01,440

I'm drowning you bastard.

795

00:47:02,440 --> 00:47:06,440

We're using incredibly fine sand, usually called sugar sand.

796

00:47:06,440 --> 00:47:10,440

We've got water bubbling up through it, like an artesian well,

797

00:47:10,440 --> 00:47:15,440

and, you know, when we get it working, we definitely go down.

798

00:47:26,440 --> 00:47:28,440

Now it's Jamie's turn in the tank.

799

00:47:32,440 --> 00:47:37,440

That's amazing. This is just so buoyant.

800

00:47:37,440 --> 00:47:39,440

I'm totally floating here.

801

00:47:39,440 --> 00:47:40,440

Yeah!

802

00:47:41,440 --> 00:47:45,440

And I'm not touching the bottom, so look at the buoyancy on that.

803

00:47:45,440 --> 00:47:48,440

I'm like a piece of styrofoam in here.

804

00:47:48,440 --> 00:47:51,440

This is more fun than to be allowed.

805

00:47:53,440 --> 00:47:58,440

Alright, what is our final verdict on movie-style killer quick sand?

806

00:47:58,440 --> 00:48:02,440

Well, we know that people, and even animals, have died in quick sand,

807

00:48:02,440 --> 00:48:06,440

but it's usually because of exposure of some sort, like dehydration.

808

00:48:06,440 --> 00:48:11,440

You know, they were no longer capable of extracting themselves, so they stayed there until they died.

809

00:48:11,440 --> 00:48:13,440

And the elements got to them.

810

00:48:13,440 --> 00:48:17,440

So it's not really like the quick sand dragged them under slowly,

811

00:48:17,440 --> 00:48:19,440

like we see in the movies, and then drowned them.

812

00:48:19,440 --> 00:48:26,440

No, in fact, you're quite buoyant, because the quick sand is sort of a mixture of sand and water

813

00:48:26,440 --> 00:48:29,440

that's actually quite heavy, and you float like a cork on it.

814

00:48:29,440 --> 00:48:32,440

The best thing you can do is just lay on your back,

815

00:48:32,440 --> 00:48:35,440

and you're going to bob around fairly high up in it,

816

00:48:35,440 --> 00:48:39,440

and then, of course, use the vine or the walking stick or whatever happens to be handy

817

00:48:39,440 --> 00:48:42,440

to try and gently pull yourself out of it.

818

00:48:42,440 --> 00:48:46,440

So the MythBuster's final word on Hollywood-style killer quick sand,

819

00:48:46,440 --> 00:48:48,440

confirm plausible or busted?

820

00:48:48,440 --> 00:48:50,440

Surprised you even have to ask.

821

00:48:50,440 --> 00:48:53,440

It's absolutely busted. No such thing.

822

00:48:53,440 --> 00:48:55,440

I agree. Completely busted.

823

00:48:56,440 --> 00:48:59,440

The MythBuster

824

00:49:26,440 --> 00:49:29,440

The MythBuster