



PORTO INNOVATION WEEK. WATER

**JOIN US TO FOSTER WATER
INNOVATION!**

27, 28 AND 29 SEPTEMBER 2017
ALFÂNDEGA PORTO CONGRESS CENTRE

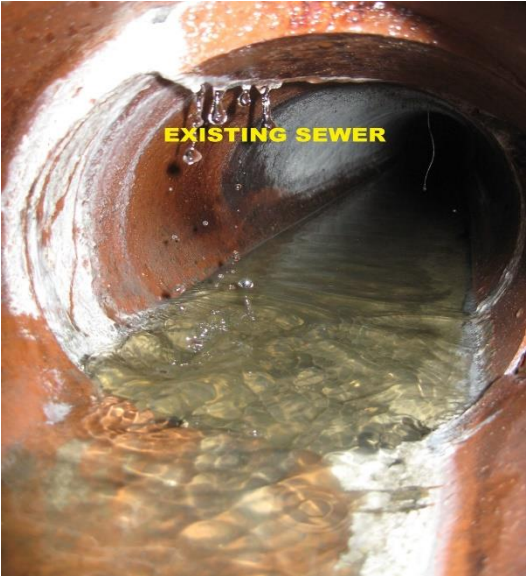
BOOTH 72



**THE USE OF SMOKE MACHINES TO DETECT UNREGULATED
STORMWATER CONNECTIONS IN THE SEWAGE SYSTEM**

DUARTE, MANUEL
CEO BOOMLIFT
MDUARTE@BOOMLIFT.PT

TECH TALKS & THE HUB



THE USE OF SMOKE MACHINES TO DETECT UNREGULATED STORMWATER CONNECTIONS IN THE SEWAGE SYSTEM



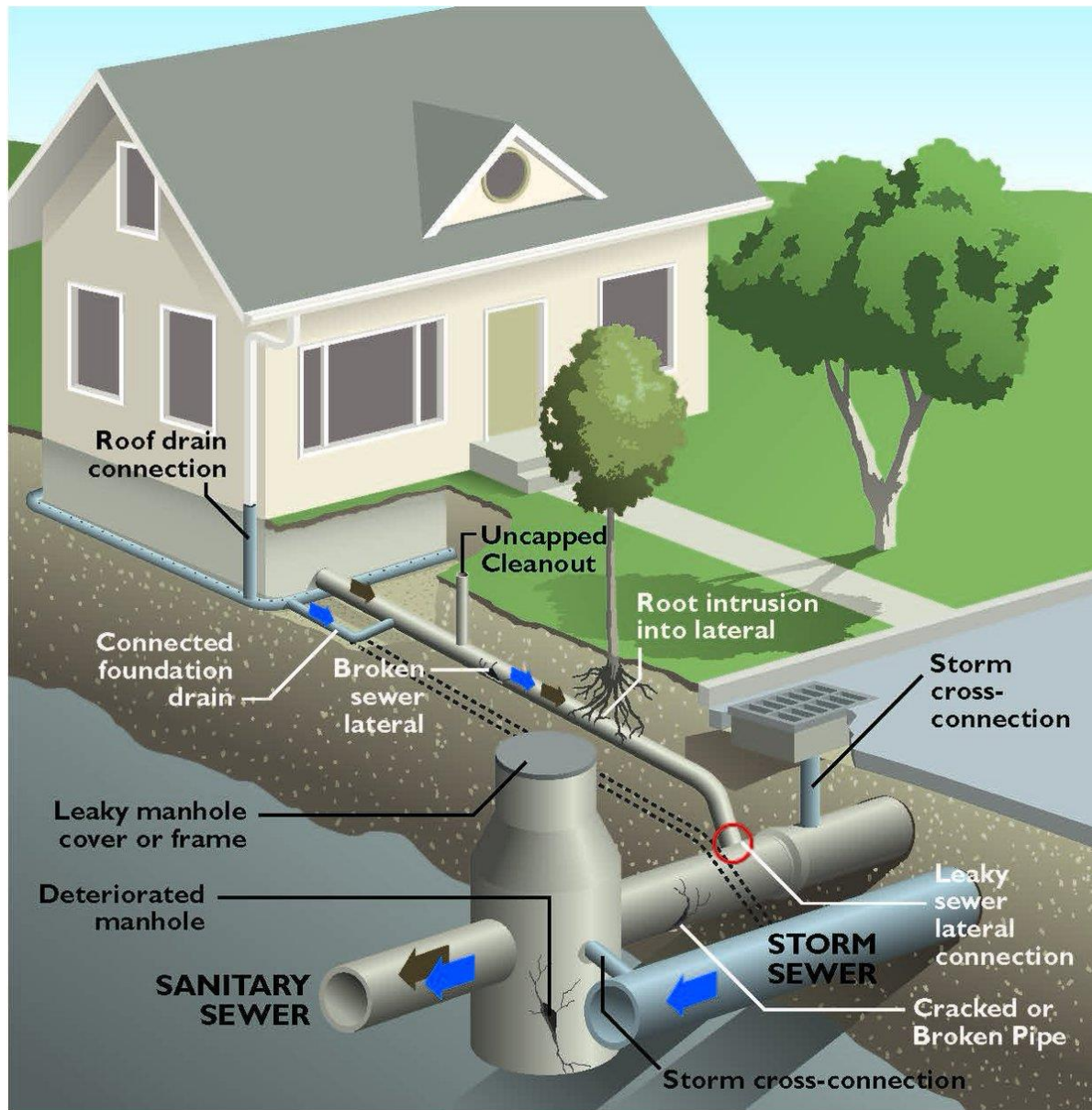
Why is Smoke Testing Necessary?

The sewer system was designed to collect waste WATER from homes and businesses, not rain water or ground water.

When rain or ground water enters the sewer system through wrong connections, cracked pipes, it takes up needed capacity in the sewer system, especially during heavy rain events.

To prevent this unwanted infiltration and inflow into the sewer system, we develop the equipment to find where are these problems.

By using smoke testing Equipment and taking the correct actions we'll be able to remove millions of liters per day of extraneous flow that represents high values for an annual cost savings



THE USE OF SMOKE MACHINES TO DETECT UNREGULATED STORMWATER CONNECTIONS IN THE SEWAGE SYSTEM

Smoke testing is an economical and fast method for identifying the location of structural damage and undocumented /connections.

The equipment needs a big capacity to test specific zones and do the work in a fast way

THE USE OF SMOKE MACHINES TO DETECT UNREGULATED STORMWATER CONNECTIONS IN THE SEWAGE SYSTEM



The FASTSMOKER, an electrical equipment is built with strong ventilator of blow capacity over 600m³/min of smoke, power supplier for full working 3Kva.

- Is easy to be moved from one point to another;
- New Hight pressure smoke production boiler;
- New position of the hot point ;
- Remote control ;

THE USE OF SMOKE MACHINES TO DETECT UNREGULATED STORMWATER CONNECTIONS IN THE SEWAGE SYSTEM



The FASTSMOKER have an INNOVATIVE building points:


- Big capacity motor on the vent system;
- Regulation of velocity ;
- New chassi;
- Cover of the tank location;

THE USE OF SMOKE MACHINES TO DETECT UNREGULATED STORMWATER CONNECTIONS IN THE SEWAGE SYSTEM

The FASTSMOKER have an INNOVATIVE building points:

- Removal tank;
- New smoke liquid – distilled water and liquid glycerin ;
- CE certification EMC 2006/42; 2008/125



Declaração de conformidade 

Produto: Equipamento - Nome: Gerador de fumos
Marca: FASTSMOKER da BOOMLIFT lda

Declaramos sobre nossa responsabilidade que o produto da marca FASTSMOKER está em conformidade e atende às regulamentações das seguintes diretivas da CE com os requisitos, aplicáveis nas normas harmonizadas mencionadas ou outros documentos normativos

CE EMC Diretiva 2006/42/CE Máquinas

CE EMC Diretiva 2009/125/CE -Ecodesenho

CE EMC Diretiva 2004/108/CE

São assegurados os parâmetros (EMC) Compatibilidade eletromagnética parte 6-3 de acordo com a norma EN61000-6-3: 2007, cumprindo os standards de funcionamento residenciais, comerciais e ambientes industriais.

Cumpra a norma EN61000-6-3: 2007 parte 6-3 relativamente a componentes eletromagnéticos (EMC) em ambientes industriais, comerciais e residenciais


CE Baixa Tensão Diretiva 2006/95/CE

Cumpra os padrões da EN 60950 safety of IT equipment (Requisitos gerais)

Data de entrega: 18 maio 2016

maio 2016


A gerência

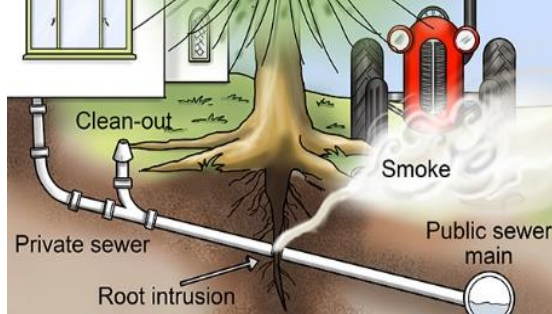
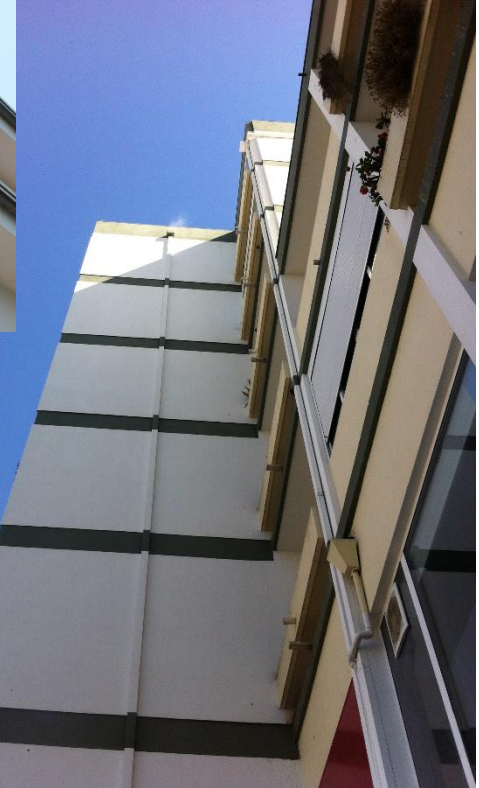
 Venda, Aluguer e Assistência Industrial, Lda
Av. Herminia Silva, Lote 60, Lote B - 2620-535 RAMADA - Odivelas - PORTUGAL
Telef./Fax: 219314772 NIF: P 507 686 900



05 | 10

THE USE OF SMOKE MACHINES TO DETECT UNREGULATED STORMWATER CONNECTIONS IN THE SEWAGE SYSTEM

SANITARY SEWER SYSTEM **SMOKE TESTING**



06 | 10

THE USE OF SMOKE MACHINES TO DETECT UNREGULATED STORMWATER CONNECTIONS IN THE SEWAGE SYSTEM

What is exactly a Smoke Test?

A two/tree man crew place a Smoke Machine over manholes and smoke is blow through the piping sewer system. Anywhere the smoke exits, there is potential for rain water to enter the sewer pipe system.

The smoke is non-toxic, harmless and has no odor.

If the line has defects, the smoke will find the break and try to escape trough the break.

If we have one drain trap, that creates a type seal and blocks gases from rising up through the drain into the home that also keep the smoke from entering



THE USE OF SMOKE MACHINES TO DETECT UNREGULATED STORMWATER CONNECTIONS IN THE SEWAGE SYSTEM

What exactly is the cost of Smoke Test and the recommended equipment ?

Examples of Improper Connections to the Sanitary Sewer System



Normally each test consists of two sections line 250 meters long of pipe with 300mm diameter, require 5 to 6 minutes of smoke to walk the test area.

The smoke Machine need to have capacity of 566 m³/min.

Other items required include line plugs etc.

A crew can easily test 3000meters of sewer line in 8h/work

THE USE OF SMOKE MACHINES TO DETECT UNREGULATED STORMWATER CONNECTIONS IN THE SEWAGE SYSTEM





PORTO

INNOVATION WEEK.

WATER

**JOIN US TO FOSTER WATER
INNOVATION!**

27, 28 AND 29 SEPTEMBER 2017
ALFÂNDEGA PORTO CONGRESS CENTRE

BOOTH 72



THANK YOU

DUARTE, MANUEL
CEO BOOMLIFT
MDUARTE@BOOMLIFT.PT

TECH TALKS & THE HUB