

S.A.V. and winter: rapid preparation of salt brine solutions

- **Stefano Nervo**
- application engineer
- Agristrade S.p.A. - Italy
- nervo@agristrade.com

Marcello Christillin

Position Arial 18

S.A.V. – Società Autostrade Valdostane - Italy



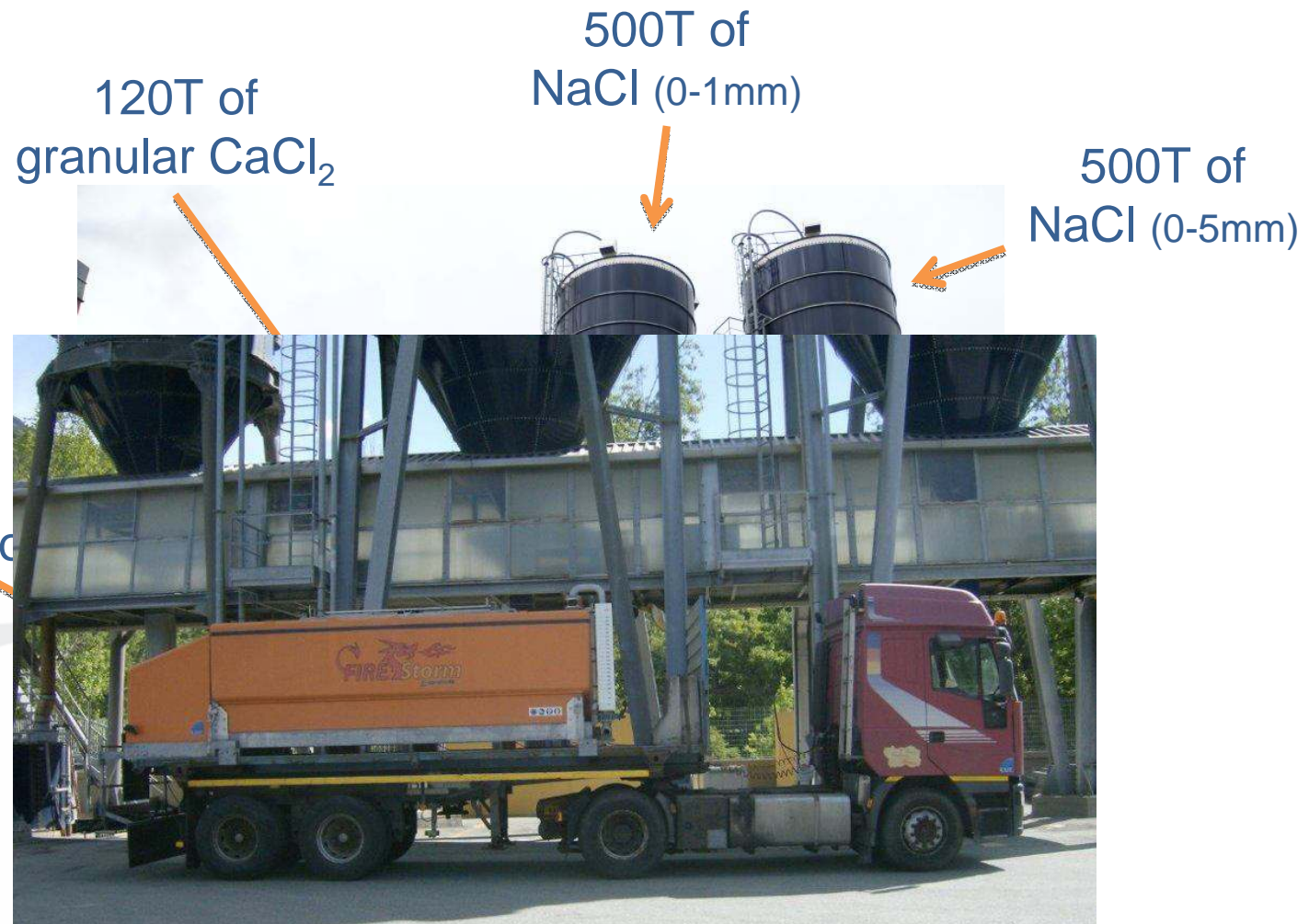
0. CONTENT

1. Introduction
2. The origin of the idea
3. The New Facility
4. Economical analisys

1. INTRODUCTION

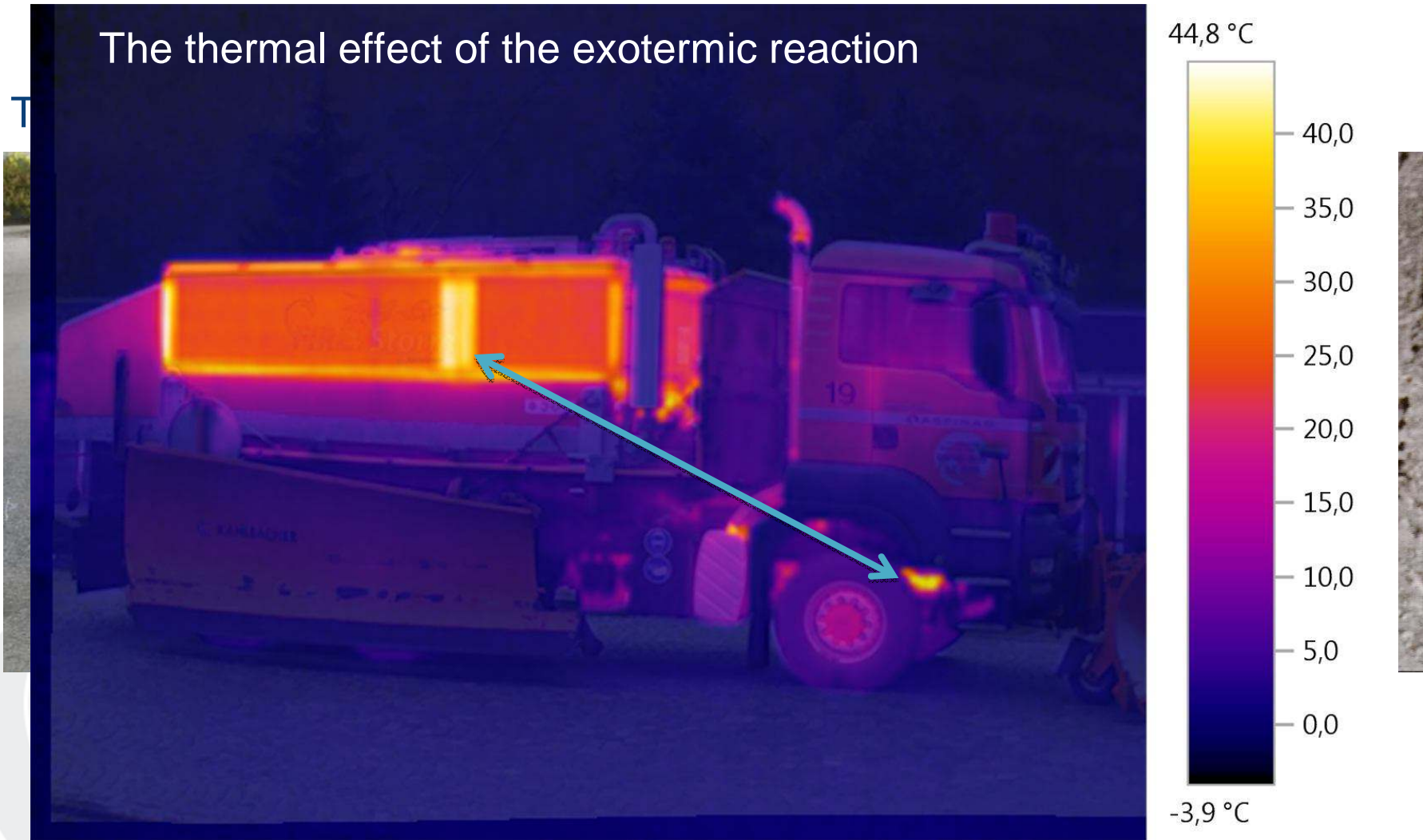


1. INTRODUCTION

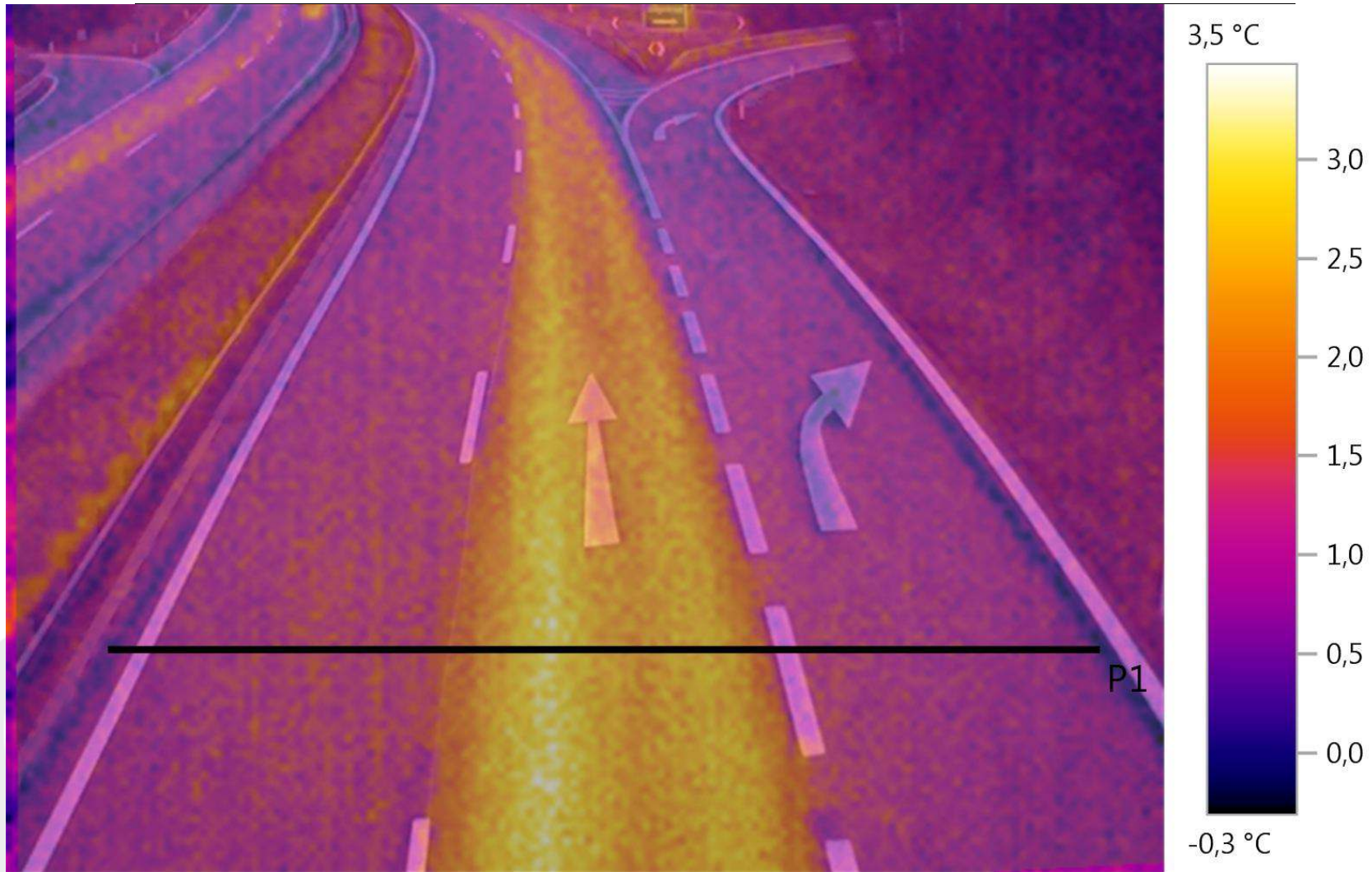


2. THE ORIGIN OF THE IDEA

The thermal effect of the exothermic reaction

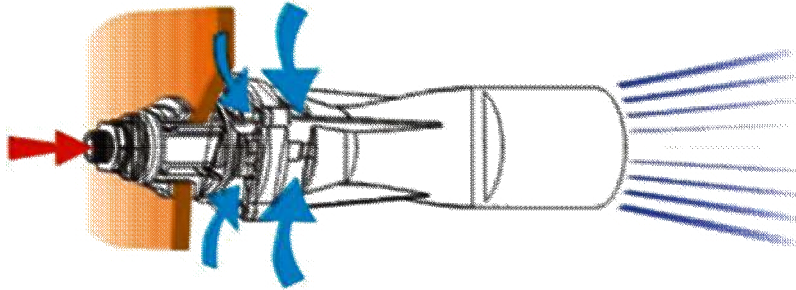


2. THE ORIGIN OF THE IDEA



3. THE NEW FACILITY

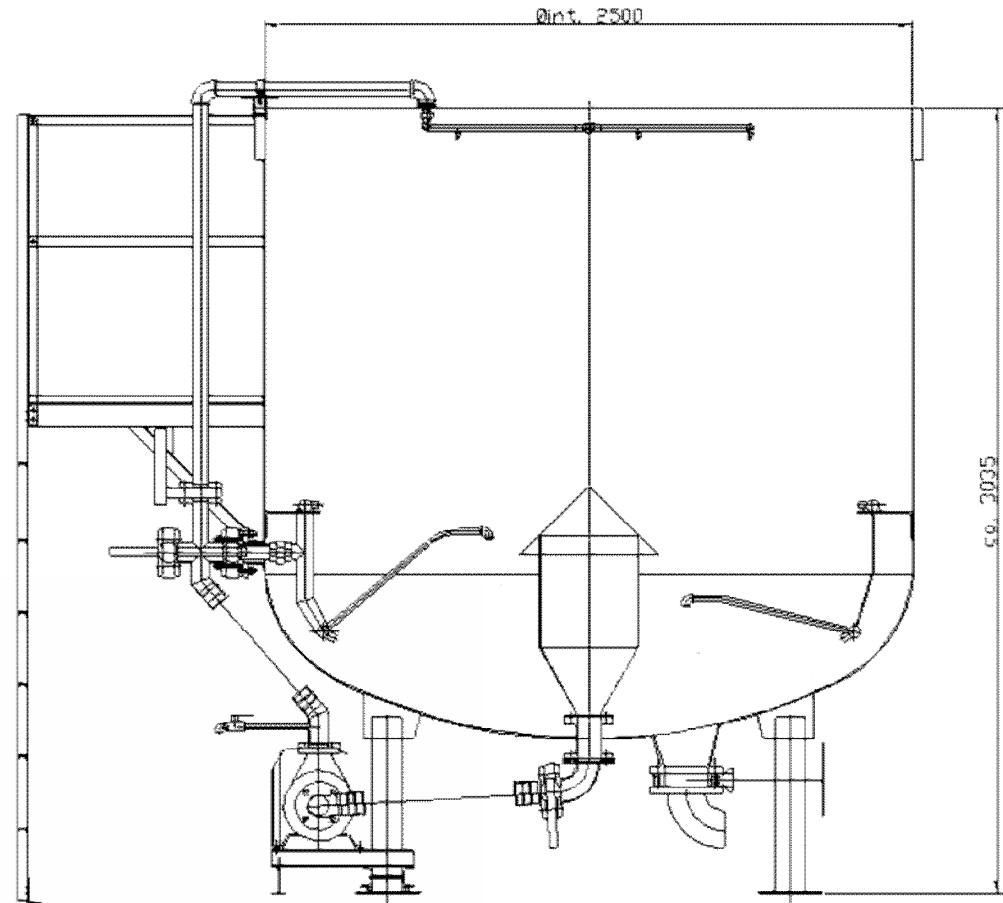
The Venturi's effect nozzle



BEST PERFORMANCE EVER

10,000l in 5min = 2000l/min
- for CaCl_2

10,000l in 30min = 333l/min
- for dirty NaCl



3. THE NEW FACILITY

ONLY 3 STEPS

1-FILL THE TANK WITH PURE WATER

2-PUT SALT INTO THE TANK

3-PUSH START BUTTON

BIG BAG



3. THE NEW FACILITY

SOME OPTIONALS

1-LOAD CELLS

2-ELECTROVALVES

3-EMERGENCY SENSOR



3. THE NEW FACILITY

DIRT (ROCKS) FILTERED BY FACILITY



4. ECONOMICAL ANALISYS

A practical example preparing brine with granular CaCl_2

1T of prepared CaCl_2 brine is **€ 117.00**

1T of CaCl_2 is €265.00

1T of granular CaCl_2 is used to produce 3.48T of brine
(cost of pure water excluded)

This means a cost of about **€ 76.00** for every T of self produced brine



4. ECONOMICAL ANALISYS

726T of brine are used every year
by each small company managing italian highways

1T per prepared CaCl_2 brine is € 117.00

1T per self produced CaCl_2 brine is € 76.00

SELF vs PREPARED

€ -41,00

This entails a SAVING of €29,766.00/year

4. ECONOMICAL ANALISYS

THREE CONCEPTS TO REMEMBER

1.SIMPLE MANAGEMENT

2.BETTER PERFORMANCES EVER

3.COSTS REDUCTION



THANK YOU FOR
YOUR ATTENTION