



Baraldi

- **BARALDI**

TTV thermocamera system

Release agents

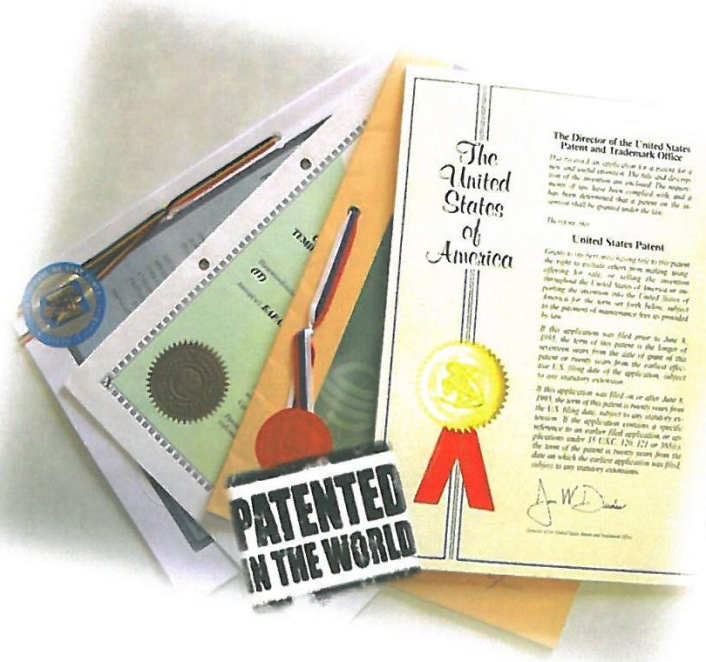
- **MOTULTECH**

Metalworking fluids

Industrial lubrication

- **TTV “TOTAL THERMAL VISION”** is the *New Generation* of SMART LUBRICATION SYSTEM™
- **TTV** is a thermographic system that produces a **Complete Thermal Map of the Die at Each Cycle**
- **TTV** allows a detailed control of the die surface . . . cycle after cycle ...
- **TTV** is a revolutionary control system for the die surface temperature as well as the SPC (**System Parameters Control**) is for the die-casting machine parameters.
- **TTV** allows to **drive better** your die casting machine as well as a dashboard control panel allows to drive better your cars
- “No Action without data; no data without action” **TTV** is the keystone ! We can not improve what we don’t measure: **TTV** help to check the OEE (Overall Equipment Effectiveness) of Die Casting Machine



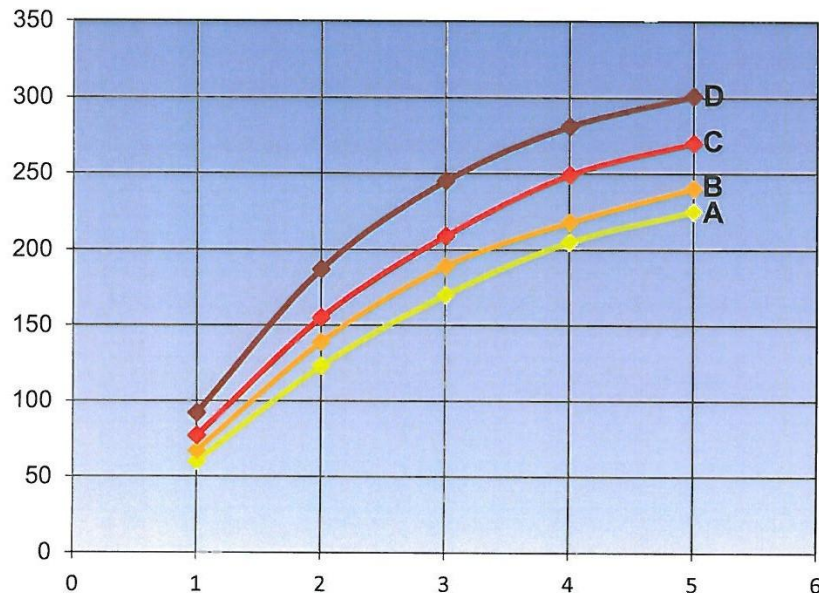
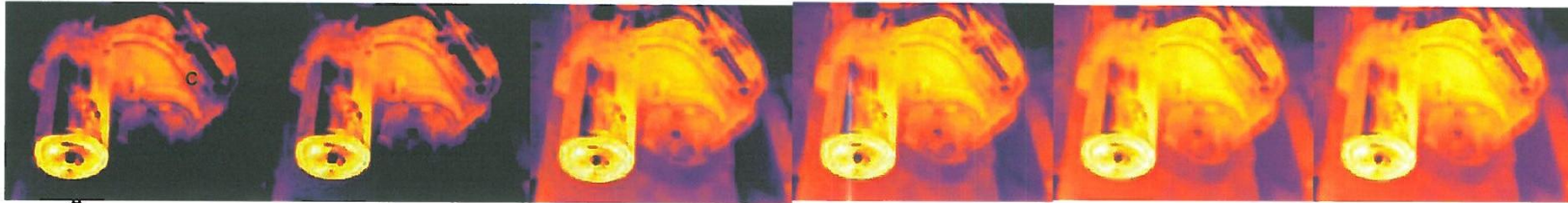


TTV is a Technology protect by
International Patents

MOTUL TECH

Baraldi

"TOTAL THERMAL VISION" allows to optimize the
PRODUCTION START UP and WARM-UP phases. . .



- **NOT** a part less than necessary because dangerous for the die, **BUT NOT** a rejected part more, that becomes a **COST**.
- Defining an ideal Thermal Ramp to **safeguard** the service life of the die. . .
- Reduce & optimize the energy consumption & avoid unnecessary waste water
- Achieving **effectiveness** first, and **efficiency** later, for a continuous improvement

*Did you already check how many TONS your foundry WASTE in
WARM UP PHASE?*

Welcome to the next release

ALUMINIUMWAY

“TOTAL THERMAL VISION” for COST SAVING

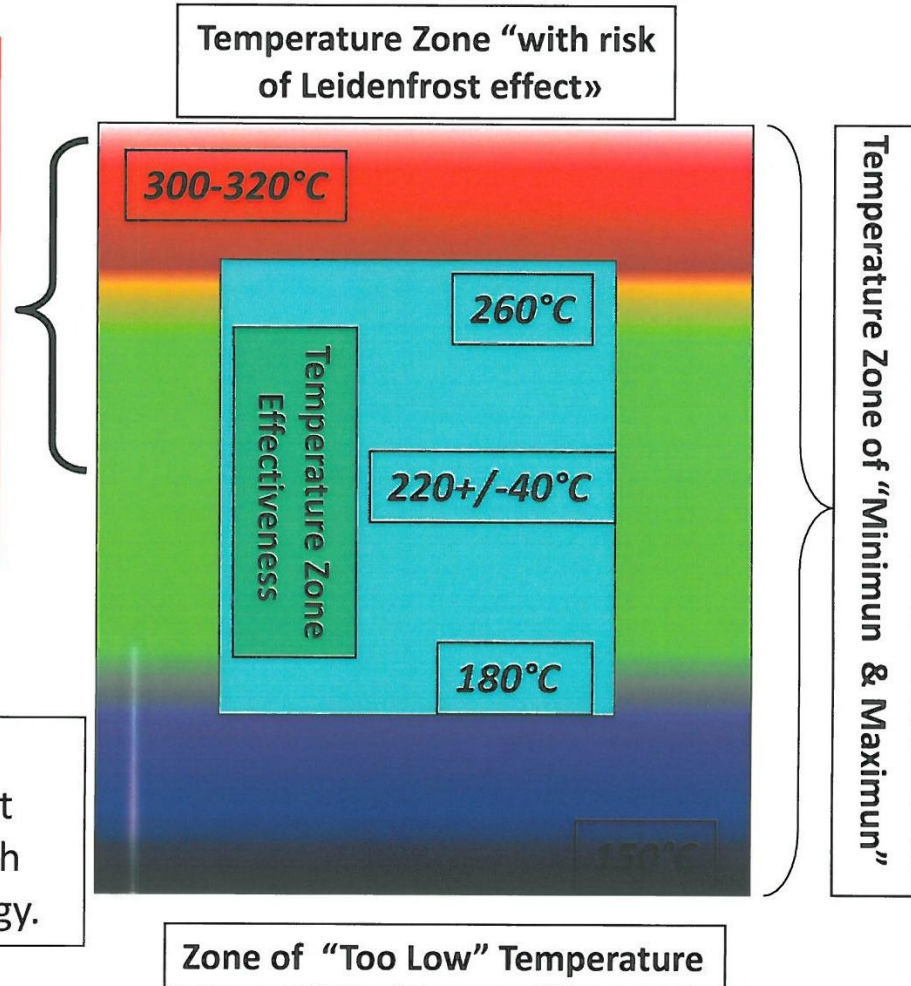
Opportunity : *Adjusting the Die surface Temperature*

“Efficiency Zone”:

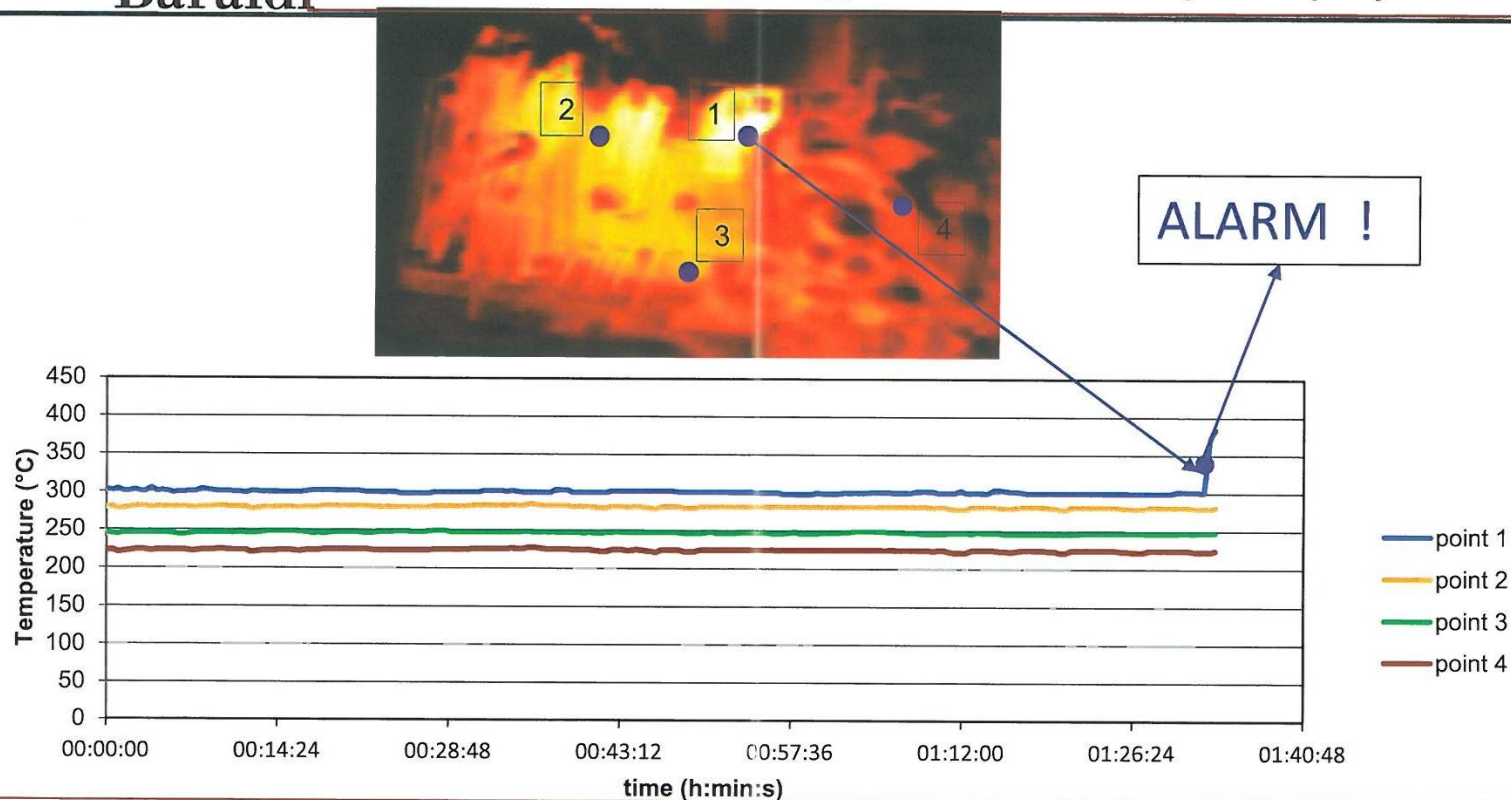
1. Less Die Lubricant
2. Less Spray Time
3. Less Waste Water
4. Limited thermal shock
5. Better metal flow
6. Better casted part finish

Reduction of Water & Energy & Cost =
Saving!

Our **R&D Dept.** continuously optimizes **CASTING SLS** products able to release at higher temperatures in combination with our **Smart Lubrication System** Technology.



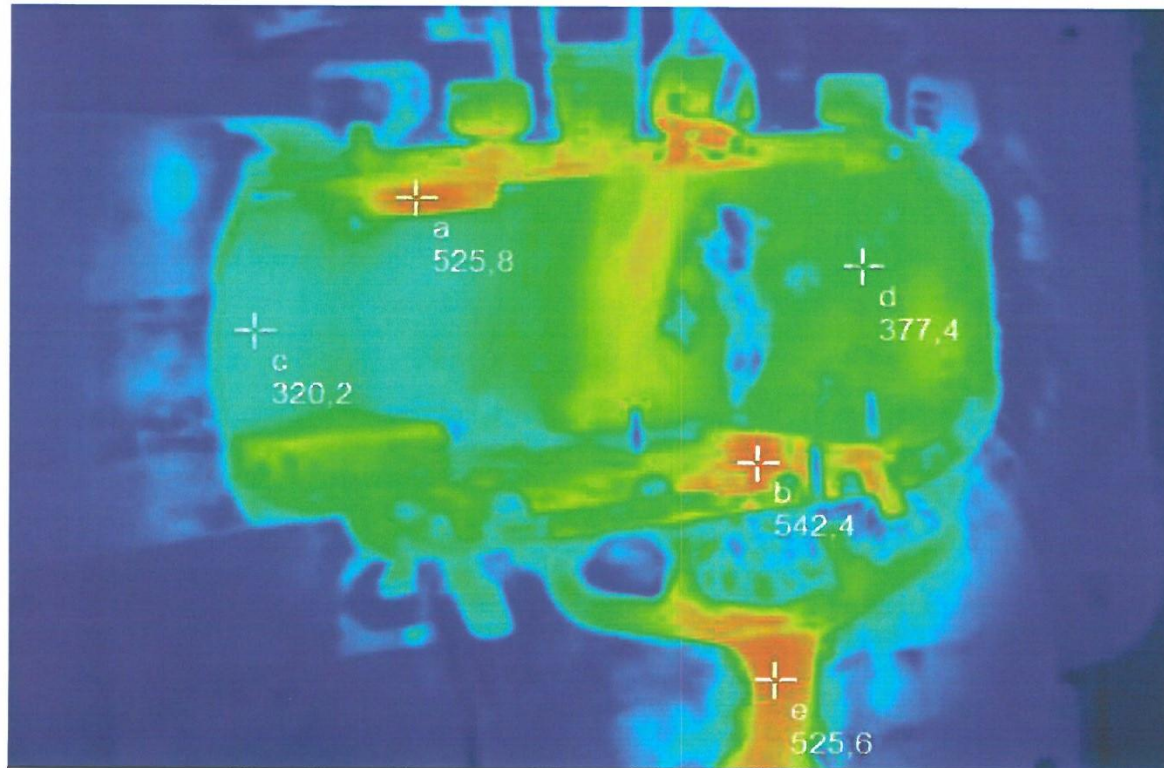
"TOTAL THERMAL VISION" *allows to identify "anomalies" promptly*



*"Anomalous" Temperature data (outside the wanted range) make a signal to be displayed on the screen or to drive a remote Alarm, allowing the Operators to provide the necessary corrective actions and to **intercept the NON quality**, die surface temperature related, as soon as it happens and not after many scraps !*

“TOTAL THERMAL VISION”

First Time EverInside The Process



Here you can see **A Movie of 3055 thermal maps (3055 cycles)** detected by TTV! You and your Technical Team can check several thermal images also as a movie, to appreciate, in a few minutes **THE THERMAL DIE LIFE!**

Thanks to the confident data achieved by **“TOTAL THERMAL VISION”** we develop our CASTING line creating an high performance **“CASTING SLS Line”** able to film and protect the die at Higher Temperature (after lubrication). Also the Chemical Development enhance thanks the IT (information Technology)

The opportunity to analyze “Several data” provide us/you the information for the “Die Lubrication” as the Summary of:

- **Die lubricant**

- The formulation, The dilution ratio, Water Etc.

- **Die Surface Temperature Management**

- Now possible on process

- **Spray System / Spray Application**

- Pressure & Amount applied , Drop size, Direction, Spray Head Configuration, etc.



We are looking for the “NEXT RELEASE”! **TRY IT is cheaper**

"TOTAL THERMAL VISION" to analyze and improve the **OEE**
Index (Overall Equipment Effectiveness)

O.E.E. Index

Equipment Availability

Loading Time

Planned
Downtime

Operation Time

Unplanned downtime
Setup & Adjustments

Net Operation Time

Reduced speed
Micro-stop

Valuable Operation Time

Defect in process
Reduced yield

OEE

Losed time

"TOTAL THERMAL VISION"
Can help to improve OEE

SMART LUBRICATION SYSTEM

represents the «Technology» upon the different kind of die surface temperature control Instruments, the «Post-Activity» and the Products

TOTAL THERMAL VISION –TTV-

instrument with Infrared Thermo Camera

CYCLE TEMPERATURE CONTROL –CTC

instruments with 2 Infrared Sensors and 2 Laser

CASTING SLS

*chemical specialties developed for and thanks to
SMART LUBRICATION SYSTEM™*

The approach:

- we get Confident Records (this is already a great target)
- by analysis of confident records we discover potential or existing problems
- thanks to analysis we can provide a diagnosis, formulating solutions / corrective actions
- when implemented the Corrective activity, we can check the results by the same instruments



Metalworking Fluids

Industrial Lubrication



- A French, independent family-owned internationally active group of companies
- One of the leaders in the formulation, manufacture and marketing of High Performance Industrial Lubricants
- More than 150 years of experience in the Industrial Lubricants market
- Turnover of more than 200 M Euro
- Sales of more than 70.000 MT of lubricants annually
- A global approach

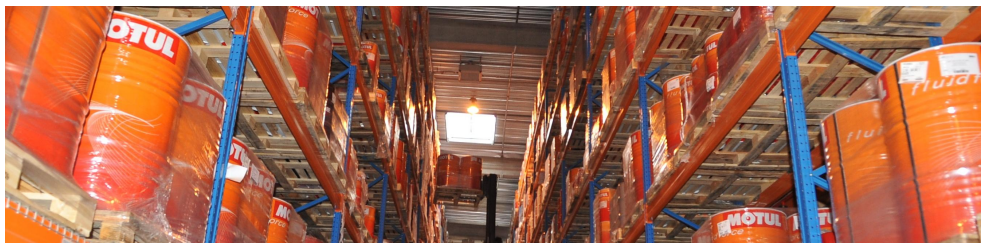
**Brand:**

The strenght of a wellknown brand

High Technology

High Performance products
Respect for the Environment
and Operators

Numerous homologations in
aeronautics, automotive,
medical, and military

**Quality**

Quality management since 1992

Accreditation to ISO 9001 - ISO TS 16949

Engaged in the process of environmental
certification

**Services :**

A Global Offer

Technical Expertise

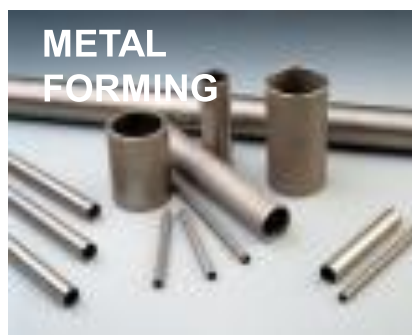
Specialised Product adaptation

Analytical and Laboratory Service

Specialist Equipment

Waste Recovery

Optimised Supply Chain



Equipments:

Products

Refractometers, Dispensing systems,
Technical Service Kit, Th & pH papers,
Skimmer, Filtration, Regeneration units

Advantages:

Professional and high tech equipments
Adapted to the Motul Tech products
Complete range for fluid servicing



Services

Products:

Product selection
Product & application training
Product & application support
Laboratory analysis
Fluid monitoring

Advantages:

Professional advices, service and analysis
Better fluids productivity through service

MOTUL **TECH** Your partner specialist in industrial lubricant

SOLUBLE OIL ☐ Danger ☐ Caution ☐ Normal

ANALYSIS REPORT

Customer detail: Sample of: Date of report:

Product name: Machine:

Tank capacity: Place of sample collection:

Results of analysis

Analyte	Unit	Standard	Results
Viscosity	cSt	100	
Concentration	%		
Water content	%		
Acid number	mg KOH/g		
Base number	mg KOH/g		
Flash point	°C		
Fire point	°C		
Cloud point	°C		
Pour point	°C		

Comments:

They rely on **MOTUL** TECH for their production



Thanks a lot for your attention !

