

Software for Data Visualization

Authors: Pedro Miola Silva and Gabriel Harthmann de Azeredo
Programming language: LabVIEW

The Problem

The company runs 20000
compressor tests per
year with 20 different
calorimeters



Wrong test parameters
lead to testing errors



How to identify those
parameters for each
calorimeter?

The Solution

A user interactive software to visualize past test results and map the application limit for each calorimeter



status code
source



NOVA ANÁLISE

GERAR RELATÓRIO

Selecione um calorímetro

0 CAL017

Calorímetros

CAL017
CAL023
CAL025

Leitura de pastas

Selecione dados

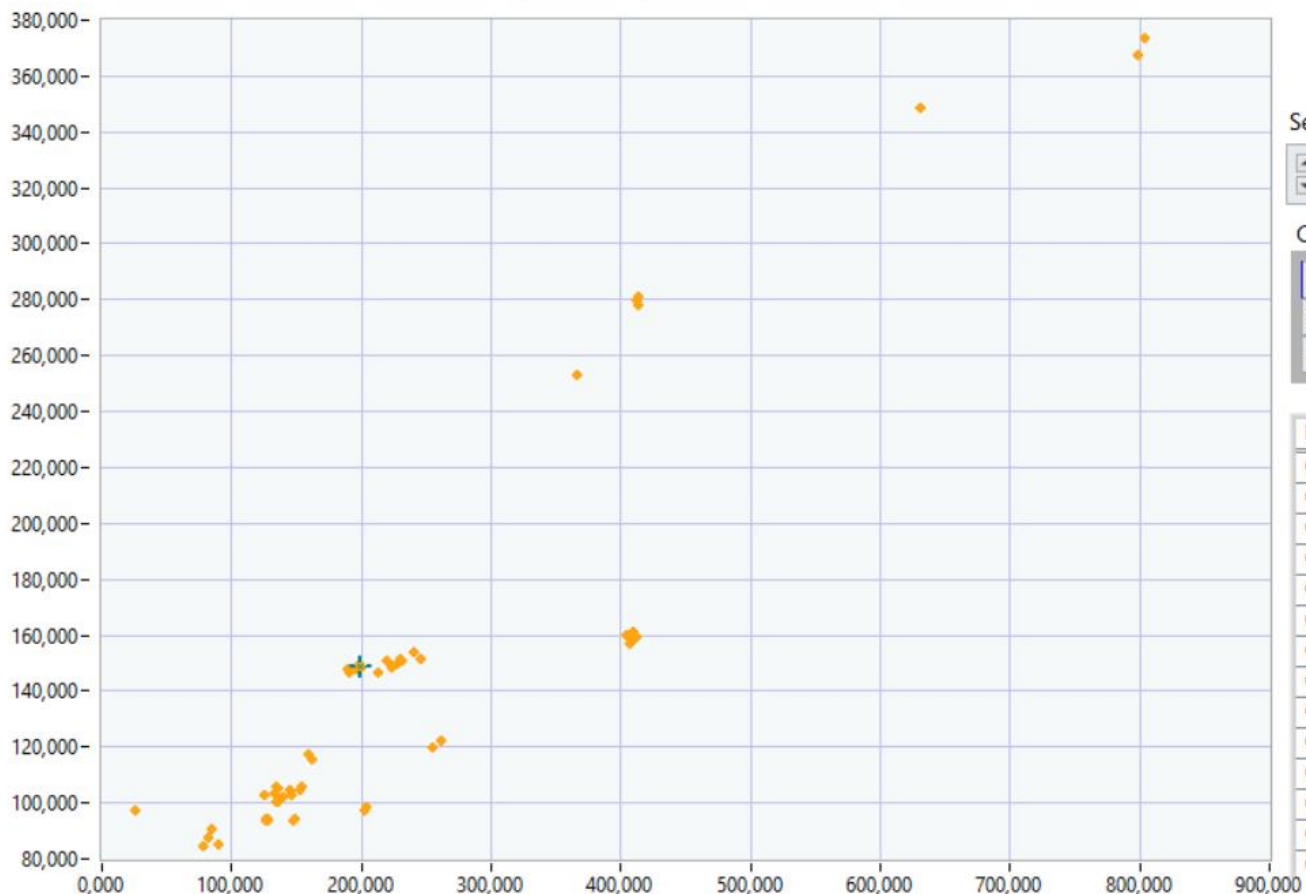
Arquivos desestabilizados

BR201905721CAL0036210
BR201906087CAL003630
BR201906375CAL003510

Lims	Request	Cool. Cap.	Power Cons	T. Evap.	T. Cond.	Duração (s)	Control 1	Control 2	Control 3
CAL017	BR201904554	81,14930	88,09000	-34,863395	70,149458	8700	0,000000	0,000000	0,000000
CAL017	BR201904554	124,13440	103,36000	-34,863395	70,149458	3060	0,000000	0,000000	0,000000
CAL017	BR201904554	76,88080	84,83690	-34,863395	70,149458	12120	0,000000	0,000000	0,000000
CAL017	BR201904554	83,67560	90,93100	-34,863395	70,149458	22680	0,000000	0,000000	0,000000
CAL017	BR201904563	25,13970	97,72070	-34,863395	70,149458	35280	0,000000	0,000000	0,000000
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CAL017	BR201905665	203,37220	98,70900	-23,158334	40,650227	9300	0,000000	0,000000	0,000000
CAL017	BR201905679	195,33730	148,18720	-23,158334	54,549380	4560	0,000000	0,000000	0,000000
CAL017	BR201905680	803,27880	373,87190	7,350252	54,549380	10380	0,000000	0,000000	0,000000
CAL017	BR201905680	797,49030	367,97660	7,350252	54,549380	7440	0,000000	0,000000	0,000000
CAL017	BR201905711	127,07690	94,55090	-23,158334	54,549380	13920	0,000000	0,000000	0,000000
CAL017	BR201905711	126,69920	94,01000	-23,158334	54,549380	3600	0,000000	0,000000	0,000000
CAL017	BR201906010	226,79060	149,85560	-23,158334	54,549380	10800	0,000000	0,000000	0,000000

Part of data has been removed due to confidentiality

Cursors:	X	Y	Capacidade	Eixo X
Cursor	03:18	148,512		Capacidade
				Eixo Y
				Consumo



status

code

d 0

source



NOVA ANÁLISE

GERAR RELATÓRIO

Begin a new analysis to select the data

Selecione um calorímetro

0

CAL017

Calorímetros

CAL017

CAL023

CAL025

Leitura de pastas

Selecione dados

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Cursors:	X	Y	Capacidade	Eixo X
Cursor	03:18	148,512	Consumo	Capacidade
				Eixo Y
				Consumo

status

code

d 0

source



NOVA ANÁLISE

GERAR RELATÓRIO

File Reading progress
will appear here

Selecione um calorímetro

0

CAL017

Calorímetros

CAL017

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CAL025

Leitura de pastas

Selecionando dados

Arquivos desestabilizados

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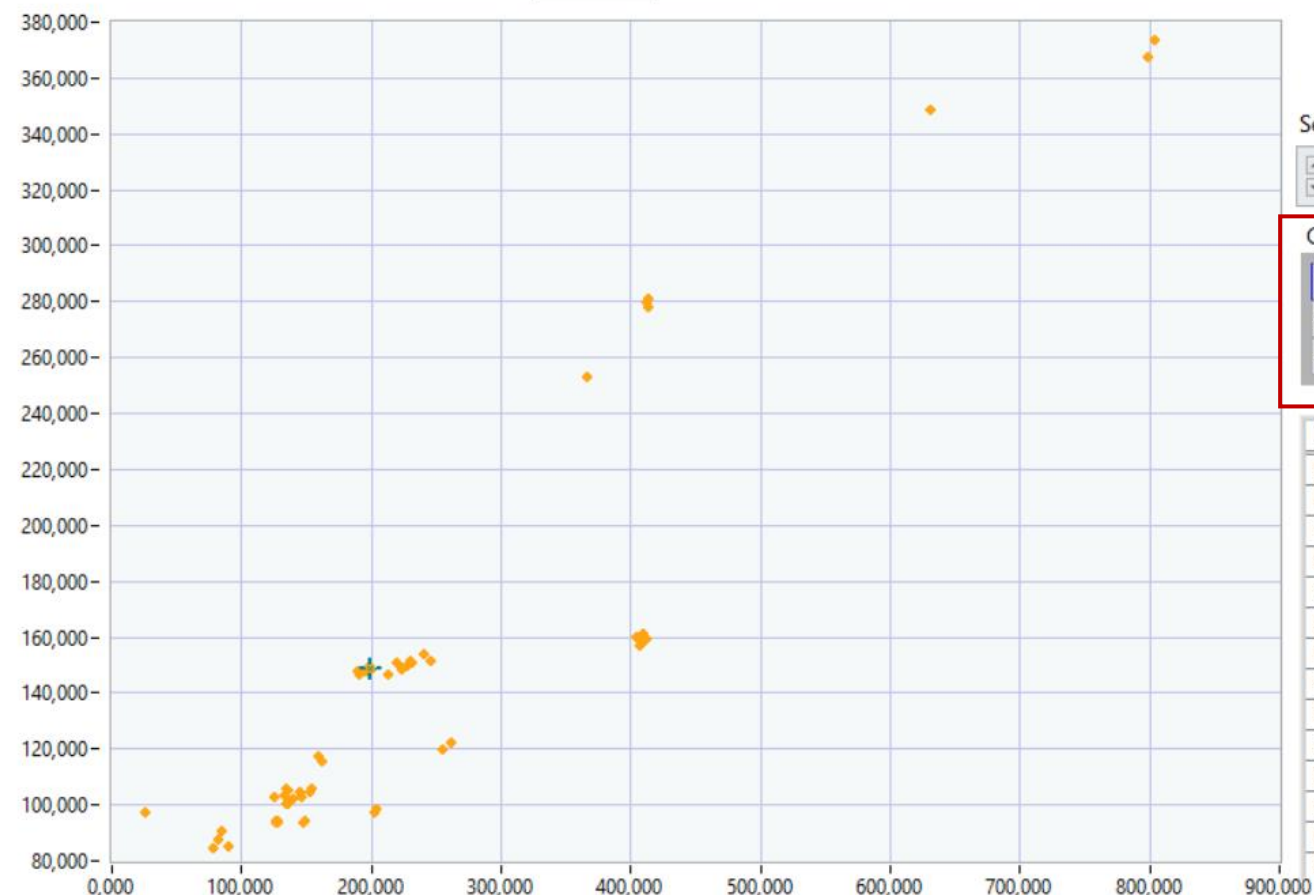
Cursors:	X	Y	Capacidade	Eixo X
Cursor	03:18	148,512		Capacidade
				Eixo Y
				Consumo

status

code

0

source



Selecione um calorímetro

0

CAL017

Calorímetros

CAL017

CAL023

CAL025

List of calorimeters available in the file

Leitura de pastas

Selecione dados

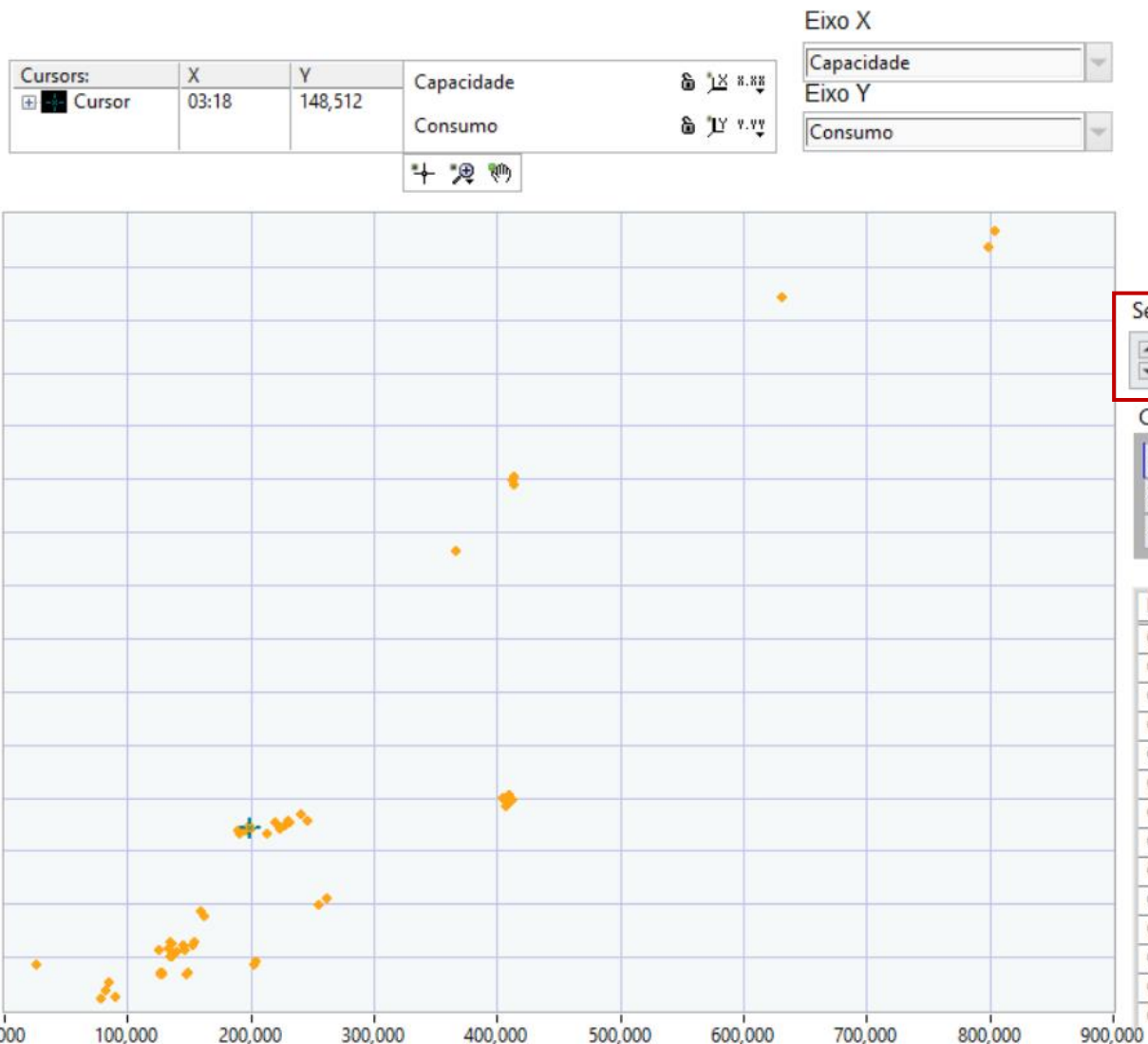
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Select the calorimeter to see the test data from it

status code
d 0
source



NOVA ANÁLISE

GERAR RELATÓRIO

Codes from the tests that went wrong

Selecione um calorímetro

0 CAL017

Calorímetros

CAL017
CAL023
CAL025

Leitura de pastas

Selecione dados

Arquivos desestabilizados

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Select XY data to show
in the graph

Cursors:	X	Y	Capacidade
Cursor	03:18	148,512	
			Consumo

Eixo X

Capacidade

Eixo Y

Consumo

status

code

d 0

source



Selecione um calorímetro

0

CAL017

Calorímetros

CAL017

CAL023

CAL025

Leitura de pastas

Selecione dados

Arquivos desestabilizados

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BR201906087CAL003630

BR201906375CAL003510

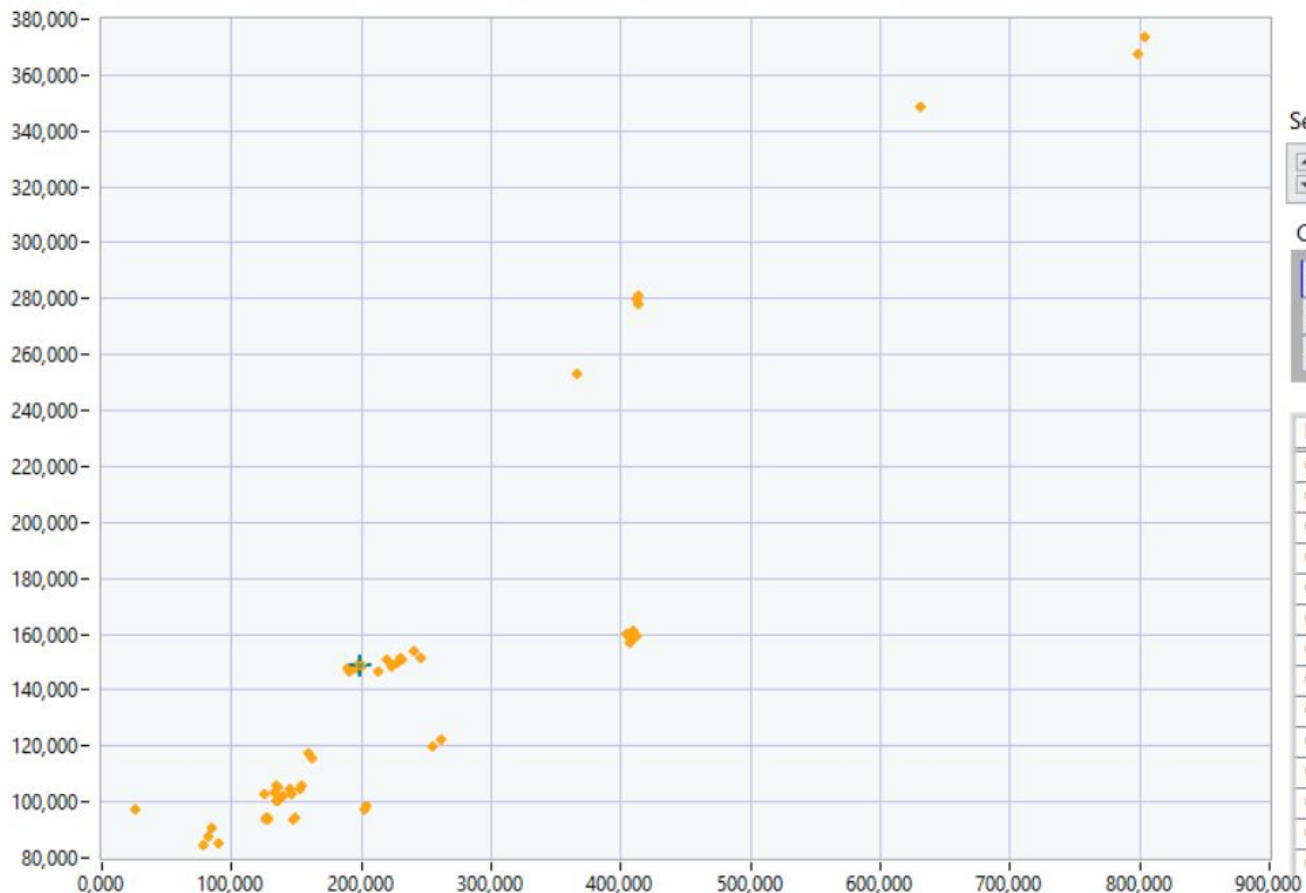
Lims	Request	Cool. Cap.	Power Cons	T. Evap.	T. Cond.	Duração (s)	Control 1	Control 2	Control 3
CAL017	BR201904554	81,14930	88,09000	-34,863395	70,149458	8700	0,000000	0,000000	0,000000
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Table from the
calorimeter data

Cursors:	X	Y	Capacidade			
Cursor	03:18	148,512	Consumo			

Eixo X
Capacidade

Eixo Y
Consumo



status

code

source

[NOVA ANÁLISE](#)[GERAR RELATÓRIO](#)

Generate a report with the data

Selecione um calorímetro

0

CAL017

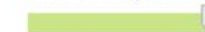
Calorímetros

CAL017

CAL023

CAL025

Leitura de pastas



Selecione dados



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