

# Validação Collapse

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O objetivo deste arquivo é registrar validação ponto a ponto no cálculo de colapso. "Original" - código disponibilizado pelo Pedro e Versiani "Plataforma" - código implementado e integrado na plataforma Quality Para realizar essa validação foi utilizado os arquivos de dados em anexo:

- [WT\\_data\\_condensed\\_wt.xlsx](#)
- [OD\\_data\\_condensed\\_od.xlsx](#)

## Método de validação:

### 1. Leitura e verificação de arquivos:

- Ler arquivos nos códigos 'original' versão do Versiani e executar o verify\_pipe realizando as conversões de unidade
- Ler arquivos na plataforma realizando as conversões de unidade e executando o verify\_pipe na plataforma
- Comparar valores de saída original vs plataforma

### 2. Execução do modelo de colapso:

- Rodar o modelo de colapso com valores sugeridos na versão original
- Executar o valor de colapso com os mesmo parâmetros de entrada na plataforma
- Comparar valores de colapso de saída original vs plataforma

### 3. Executar as mesmas etapas anteriores com os arquivos Muskogee (Rafael Braga)

## Leitura e verificação de arquivos

1. Ler arquivos nos códigos 'original' versão do Versiani e executar o verify\_pipe realizando as conversões de unidade

```
# create the units dictionary
dict_units = {"position_WT": "in", #unit
              "position_OD" : "ft",
              "WT" : "in",
              "OD" : "mm",
              "blind_length_end_OD" : "mm",
              "blind_length_end_WT" : "mm",
              "drift_length" : "mm",
              "min_pipe_length" : "mm",
              "max_pipe_length" : "mm",
              "cut_off_length" : "mm",
              "WTnom" : "in",
              "ODnom" : "mm",
              "output_position": "mm",
              "output_WT": "mm",
              "output_OD": "mm"}
```

```
#body
body_dict = {"input" : {
    "df_segments_OD": data_od.to_dict('record'),
    "df_segments_WT" : data_wt.to_dict('record'),
    "blind_length_end_WT" : 300,
    "blind_length_end_OD" : 300,
    "averaging_length_collapse" : averaging_length_collapse,
    "drift_length" : 300,
    "min_pipe_length" : 11580,
    "max_pipe_length" : 13720,
    "cut_off_length" : 100,
    "od_limit_min" : -0.5,
    "od_limit_max" : 1,
    "RBW" : 0.9,
    "WTnom" : 0.82,
    "ODnom" : 357,
    "dict_units" : dict_units}
}
```

- [verify\\_pipe\\_original.xlsx](#)
- 2. Ler arquivos na plataforma realizando as conversões de unidade e executando o verify\_pipe na plataforma
- Configuração de Projeto:

## Project

Name

condensed 2

Mill Order

Customer

Customer Order

## OUTSIDE DIAMETER

OD nom

357

mm

OD min (%)

0

OD max (%)

1

OD blind

300

mm

## WALL THICKNESS

WT nom

0,82

in

WT blind

300

mm

## SPECIFICATION

Grade

13CR55

Rbw

0,9

PFS

Cut off

100

mm

Drift

300

mm

Collapse rating

10300

psi

Collapse Rating Premium

10300

psi

Range

Custom

mm

Range

11580

13720

Dimension unit

mm

Pressure unit

psi

CANCEL

SAVE

```

{
  "id": 67,
  "dth_created_reg": "2021-04-14T00:08:44.992Z",
  "dth_updated_reg": "2021-04-16T20:26:46.713Z",
  "project_name": "condensed 2",
  "mill_order": null,
  "mill": "vsb",
  "customer": null,
  "customer_order": null,
  "collapse_rating": 10300.0,
  "collapse_rating_unit": "psi",
  "cut_off": 100.0,
  "cut_off_unit": "mm",
  "grade": "13CRSS",
  "rbw": 0.9,
  "drift": 300,
  "drift_unit": "mm",
  "input_range": "Custom",
  "range_unit": "mm",
  "range_min": 11580.0,

```

```

"range_max": 13720.0,
"averaging_length_collapse": 4,
"od_nom": 357.0,
"od_unit": "mm",
"od_min": 0,
"od_min_unit": "%",
"od_max": 1,
"od_max_unit": "%",
"od_blind": 300,
"od_blind_unit": "mm",
"wt_nom": 0.82,
"wt_unit": "in",
"wt_blind": 300,
"wt_blind_unit": "mm",
"output_dimension_unit": "mm",
"output_pressure_unit": "psi",
"upload_pipes_status": "checked",
"verify_pipe_status": "checked",
"data_laboratory_status": "checked",
"collapse_calculation_status": "current",
"end_cropping_status": "able",
"report_status": "disabled",
"requests": [
  {
    "description": "WT_data_condensed_wt.xlsx, OD_data_condensed_od.xlsx",
    "functionName": "assignMetadata",
    "type": "upload.data",
    "id": "0b9c6b1c-9fbd-4c06-8e9a-398462099b56",
    "payload": { "uuid": "0b9c6b1c-9fbd-4c06-8e9a-398462099b56",
"od_unit": "mm", "od_position_unit": "ft", "wt_unit": "in",
"wt_position_unit": "in" },
    "stage": "upload_pipes_status",
    "status": "COMPLETED",
    "count": 5,
    "error": null
  }
],
"collapse_rating_premium_unit": "psi",
"pfs": null,
"collapse_rating_premium": 10300.0
}

```

- Arquivos com unidades convertidas na plataforma
  - [od\\_platform.csv](#)
  - [wt\\_platform.csv](#)
- Verify Pipe
  - [warnings\\_original](#)
  - [warnings\\_platform](#)
  - [verify\\_pipe\\_originals](#)

- [verify\\_pipe\\_platform](#)

## 1. Comparar valores de saída original vs plataforma

### • Comparativo de warnings

- DB2397 XX 31

#### ■ original

```
{
  "duplic_inspec_OD": false,
  "duplic_inspec_WT": false,
  "empty_values_ODODmin": false,
  "empty_values_ODODavg": false,
  "empty_values_ODODmax": false,
  "empty_values_WTWTmin": false,
  "empty_values_WTWTavg": false,
  "empty_values_WTWTmax": false,
  "short_pipe": true,
  "long_pipe": false,
  "wtminWTmin": false,
  "wtminWTmin_segment": null,
  "odminODmin": false,
  "odminODmin_segment": null,
  "odmaxODmax": true,
  "odmaxODmax_segment": "[ 700.0, 800.0, 900.0, 1000.0, 1100.0, 1200.0,
1300.0, 1400.0, 1500.0, 1600.0, 1700.0, 1800.0, 1900.0, 2000.0, 2100.0,
2200.0, 2300.0, 2400.0, 2500.0, 2600.0, 2700.0, 2800.0, 2900.0, 3000.0,
3100.0, 3200.0, 3300.0, 3400.0, 3500.0, 3600.0, 3700.0, 3800.0, 3900.0,
4000.0, 4100.0, 4200.0, 4300.0, 4400.0, 4500.0, 4600.0, 4700.0, 4800.0,
4900.0, 5000.0, 5100.0, 5200.0, 5300.0, 5400.0, 5500.0, 5600.0, 5700.0,
5800.0, 5900.0, 6000.0, 6100.0, 6200.0, 6300.0, 6400.0, 6500.0, 6600.0,
6700.0, 6800.0, 6900.0, 7000.0, 7100.0, 7200.0, 7300.0, 7400.0, 7500.0,
7600.0, 7700.0, 7800.0, 7900.0, 8000.0, 8100.0, 8200.0, 8300.0, 8400.0,
8500.0, 8600.0, 8700.0, 8800.0, 8900.0, 9000.0, 9100.0, 9200.0, 9300.0,
9400.0, 9500.0, 9600.0, 9700.0, 9800.0, 9900.0, 10000.0, 10100.0,
10200.0, 10300.0, 10400.0, 10500.0, 10600.0]",
  "repeat_measurWTmin": false,
  "repeat_measurWTavg": false,
  "repeat_measurWTmax": false,
  "repeat_measurODmin": false,
  "repeat_measurODavg": false,
  "repeat_measurODmax": false,
  "ab_ovov": false,
  "ab_ovov_segment": null,
  "ab_eccccc": false,
  "ab_eccccc_segment": null,
  "ab_WTminWTmin": false,
  "ab_WTminWTmin_segment": null,
  "max_pitch_OD": false,
```

```
"max_pitch_WT": false
}
```

#### ■ platform

```
{
  "duplic_inspec_OD": false,
  "duplic_inspec_WT": false,
  "empty_values_ODODmin": false,
  "empty_values_ODODavg": false,
  "empty_values_ODODmax": false,
  "empty_values_WTWtmin": false,
  "empty_values_WTWtavg": false,
  "empty_values_WTWtmax": false,
  "short_pipe": true,
  "long_pipe": false,
  "wtminWTmin": false,
  "wtminWTmin_segment": null,
  "odminODmin": false,
  "odminODmin_segment": null,
  "odmaxODmax": true,
  "odmaxODmax_segment": "
[600.0,700.0,800.0,900.0,1000.0,1100.0,1200.0,1300.0,1400.0,1500.0,1600.
.0,1700.0,1800.0,1900.0,2000.0,2100.0,2200.0,2300.0,2400.0,2500.0,2600.
0,2700.0,2800.0,2900.0,3000.0,3100.0,3200.0,3300.0,3400.0,3500.0,3600.0
,3700.0,3800.0,3900.0,4000.0,4100.0,4200.0,4300.0,4400.0,4500.0,4600.0,
4700.0,4800.0,4900.0,5000.0,5100.0,5200.0,5300.0,5400.0,5500.0,5600.0,5
700.0,5800.0,5900.0,6000.0,6100.0,6200.0,6300.0,6400.0,6500.0,6600.0,67
00.0,6800.0,6900.0,7000.0,7100.0,7200.0,7300.0,7400.0,7500.0,7600.0,770
0.0,7800.0,7900.0,8000.0,8100.0,8200.0,8300.0,8400.0,8500.0,8600.0,8700
.0,8800.0,8900.0,9000.0,9100.0,9200.0,9300.0,9400.0,9500.0,9600.0,9700.
0,9800.0,9900.0,10000.0,10100.0,10200.0,10300.0,10400.0,10500.0,10600.0
,10700.0,10800.0,10900.0]",
  "repeat_meurWTmin": false,
  "repeat_meurWTavg": false,
  "repeat_meurWTmax": false,
  "repeat_meurODmin": false,
  "repeat_meurODavg": false,
  "repeat_meurODmax": false,
  "ab_ovov": false,
  "ab_ovov_segment": null,
  "ab_eccccc": false,
  "ab_eccccc_segment": null,
  "ab_WTminWTmin": false,
  "ab_WTminWTmin_segment": null,
  "max_pitch_OD": false,
  "max_pitch_WT": false
}
...
```

- DB2397 XX 22

- original

```
{
  "duplic_inspec_OD": false,
  "duplic_inspec_WT": false,
  "empty_values_ODODmin": false,
  "empty_values_ODODavg": false,
  "empty_values_ODODmax": false,
  "empty_values_WTWtmin": false,
  "empty_values_WTWtavg": false,
  "empty_values_WTWtmax": false,
  "short_pipe": false,
  "long_pipe": false,
  "wtminWTmin": false,
  "wtminWTmin_segment": null,
  "odminODmin": false,
  "odminODmin_segment": null,
  "odmaxODmax": true,
  "odmaxODmax_segment": "[ 700.0, 800.0, 900.0, 1000.0, 1100.0, 1200.0,
1300.0, 1400.0, 1500.0, 1600.0, 1700.0, 1800.0, 1900.0, 2000.0, 2100.0,
2200.0, 2300.0, 2400.0, 2500.0, 2600.0, 2700.0, 2800.0, 2900.0, 3000.0,
3100.0, 3200.0, 3300.0, 3400.0, 3500.0, 3600.0, 3700.0, 3800.0, 3900.0,
4000.0, 4100.0, 4200.0, 4300.0, 4400.0, 4500.0, 4600.0, 4700.0, 4800.0,
4900.0, 5000.0, 5100.0, 5200.0, 5300.0, 5400.0, 5500.0, 5600.0, 5700.0,
5800.0, 5900.0, 6000.0, 6100.0, 6200.0, 6300.0, 6400.0, 6500.0, 6600.0,
6700.0, 6800.0, 6900.0, 7000.0, 7100.0, 7200.0, 7300.0, 7400.0, 7500.0,
7600.0, 7700.0, 7800.0, 7900.0, 8000.0, 8100.0, 8200.0, 8300.0, 8400.0,
8500.0, 8600.0, 8700.0, 8800.0, 8900.0, 9000.0, 9100.0, 9200.0, 9300.0,
9400.0, 9500.0, 9600.0, 9700.0, 9800.0, 9900.0, 10000.0, 10100.0,
10200.0, 10300.0, 10400.0, 10500.0, 10600.0, 10700.0, 10800.0, 10900.0,
11000.0, 11100.0, 11200.0, 11300.0, 11400.0, 11500.0, 11600.0, 11700.0,
11800, 11900, 12000, 12100, 12200, 12300",
  "repeat_measurWTmin": false,
  "repeat_measurWTavg": false,
  "repeat_measurWTmax": false,
  "repeat_measurODmin": false,
  "repeat_measurODavg": false,
  "repeat_measurODmax": false,
  "ab_ovov": false,
  "ab_ovov_segment": null,
  "ab_eccccc": false,
  "ab_eccccc_segment": null,
  "ab_WTminWTmin": false,
  "ab_WTminWTmin_segment": null,
  "max_pitch_OD": false,
  "max_pitch_WT": false
}
```

- platforma`

```
{
  "duplic_inspec_OD": false,
  "duplic_inspec_WT": false,
  "empty_values_ODODmin": false,
  "empty_values_ODODavg": false,
  "empty_values_ODODmax": false,
  "empty_values_WTWtmin": false,
  "empty_values_WTWtavg": false,
  "empty_values_WTWtmax": false,
  "short_pipe": false,
  "long_pipe": true,
  "wtminWTmin": false,
  "wtminWTmin_segment": null,
  "odminODmin": false,
  "odminODmin_segment": null,
  "odmaxODmax": true,
  "odmaxODmax_segment": "
[600.0,700.0,800.0,900.0,1000.0,1100.0,1200.0,1300.0,1400.0,1500.0,1600.
.0,1700.0,1800.0,1900.0,2000.0,2100.0,2200.0,2300.0,2400.0,2500.0,2600.
0,2700.0,2800.0,2900.0,3000.0,3100.0,3200.0,3300.0,3400.0,3500.0,3600.0
,3700.0,3800.0,3900.0,4000.0,4100.0,4200.0,4300.0,4400.0,4500.0,4600.0,
4700.0,4800.0,4900.0,5000.0,5100.0,5200.0,5300.0,5400.0,5500.0,5600.0,5
700.0,5800.0,5900.0,6000.0,6100.0,6200.0,6300.0,6400.0,6500.0,6600.0,67
00.0,6800.0,6900.0,7000.0,7100.0,7200.0,7300.0,7400.0,7500.0,7600.0,770
0.0,7800.0,7900.0,8000.0,8100.0,8200.0,8300.0,8400.0,8500.0,8600.0,8700
.0,8800.0,8900.0,9000.0,9100.0,9200.0,9300.0,9400.0,9500.0,9600.0,9700.
0,9800.0,9900.0,10000.0,10100.0,10200.0,10300.0,10400.0,10500.0,10600.0
,10700.0,10800.0,10900.0,11000.0,11100.0,11200.0,11300.0,11400.0,11500.
0,11600.0,11700.0,11800.0,11900.0,12000.0,12100.0,12200.0,12300.0]",
  "repeat_meurWTmin": false,
  "repeat_meurWTavg": false,
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  "repeat_meurODmin": false,
  "repeat_meurODavg": false,
  "repeat_meurODmax": false,
  "ab_ovov": false,
  "ab_ovov_segment": null,
  "ab_ececc": false,
  "ab_ececc_segment": null,
  "ab_WTminWTmin": false,
  "ab_WTminWTmin_segment": null,
  "max_pitch_OD": false,
  "max_pitch_WT": false
}
```

- DB2399 XX 54

- original



```

{
  "duplic_inspec_OD": false,
  "duplic_inspec_WT": false,
  "empty_values_ODODmin": false,
  "empty_values_ODODavg": false,
  "empty_values_ODODmax": false,
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  "empty_values_WTWTavg": false,
  "empty_values_WTWTmax": false,
  "short_pipe": false,
  "long_pipe": false,
  "wtminWTmin": false,
  "wtminWTmin_segment": null,
  "odminODmin": false,
  "odminODmin_segment": null,
  "odmaxODmax": true,
  "odmaxODmax_segment": "[ 800.0, 900.0, 1000.0, 1100.0, 1200.0,
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3100.0, 3200.0, 3300.0, 3400.0, 3500.0, 3600.0, 3700.0, 3800.0, 3900.0,
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4900.0, 5000.0, 5100.0, 5200.0, 5300.0, 5400.0, 5500.0, 5600.0, 5700.0,
5800.0, 5900.0, 6000.0, 6100.0, 6200.0, 6300.0, 6400.0, 6500.0, 6600.0,
6700.0, 6800.0, 6900.0, 7000.0, 7100.0, 7200.0, 7300.0, 7400.0, 7500.0,
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8500.0, 8600.0, 8700.0, 8800.0, 8900.0, 9000.0, 9100.0, 9200.0, 9300.0,
9400.0, 9500.0, 9600.0, 9700.0, 9800.0, 9900.0, 10000.0, 10100.0,
10200.0, 10300.0, 10400.0, 10500.0, 10600.0, 10700.0, 10800.0, 10900.0,
11000.0, 11100.0, 11200.0, 11300.0, 11400.0, 11500.0, 11600.0, 11700.0,
11800, 11900, 12000, 12100, 12200, 12300, 12400]",
  "repeat_meurWTmin": false,
  "repeat_meurWTavg": false,
  "repeat_meurWTmax": false,
  "repeat_meurODmin": false,
  "repeat_meurODavg": false,
  "repeat_meurODmax": false,
  "ab_ovov": false,
  "ab_ovov_segment": null,
  "ab_ececc": false,
  "ab_ececc_segment": null,
  "ab_WTminWTmin": false,
  "ab_WTminWTmin_segment": null,
  "max_pitch_OD": false,
  "max_pitch_WT": false
}

```

#### ■ platforma

```

{
  "duplic_inspec_OD": false,
  "duplic_inspec_WT": false,

```

```

    "empty_values_ODODmin": false,
    "empty_values_ODODavg": false,
    "empty_values_ODODmax": false,
    "empty_values_WTWTmin": false,
    "empty_values_WTWTavg": false,
    "empty_values_WTWTmax": false,
    "short_pipe": false,
    "long_pipe": true,
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    "wtminWTmin_segment": null,
    "odminODmin": false,
    "odminODmin_segment": null,
    "odmaxODmax": true,
    "odmaxODmax_segment": "
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0,2700.0,2800.0,2900.0,3000.0,3100.0,3200.0,3300.0,3400.0,3500.0,3600.0
,3700.0,3800.0,3900.0,4000.0,4100.0,4200.0,4300.0,4400.0,4500.0,4600.0,
4700.0,4800.0,4900.0,5000.0,5100.0,5200.0,5300.0,5400.0,5500.0,5600.0,5
700.0,5800.0,5900.0,6000.0,6100.0,6200.0,6300.0,6400.0,6500.0,6600.0,67
00.0,6800.0,6900.0,7000.0,7100.0,7200.0,7300.0,7400.0,7500.0,7600.0,770
0.0,7800.0,7900.0,8000.0,8100.0,8200.0,8300.0,8400.0,8500.0,8600.0,8700
.0,8800.0,8900.0,9000.0,9100.0,9200.0,9300.0,9400.0,9500.0,9600.0,9700.
0,9800.0,9900.0,10000.0,10100.0,10200.0,10300.0,10400.0,10500.0,10600.0
,10700.0,10800.0,10900.0,11000.0,11100.0,11200.0,11300.0,11400.0,11500.
0,11600.0,11700.0,11800.0,11900.0,12000.0,12100.0,12200.0,12300.0,12400
.0,12500.0]",
    "repeat_measurWTmin": false,
    "repeat_measurWTavg": false,
    "repeat_measurWTmax": false,
    "repeat_measurODmin": false,
    "repeat_measurODavg": false,
    "repeat_measurODmax": false,
    "ab_ovov": false,
    "ab_ovov_segment": null,
    "ab_eccccc": false,
    "ab_eccccc_segment": null,
    "ab_WTminWTmin": false,
    "ab_WTminWTmin_segment": null,
    "max_pitch_OD": false,
    "max_pitch_WT": false
}

```

- DB2398 XX 5

não tem no original

- DB2398 XX 17

não tem no original

- DB2398 XX 32

não tem no original

- Comparativo de valores

- DB2397 XX 31

Arquivo

Página Inicial

Inserir

Layout da Página

Fórmulas

Dados

Referências

Exibição

Calibri

11

A

A

Revisar Texto Automaticamente

Geral

Formato Condicional

Formatar como Tabela

Estilos de Célula

Inserir

Excluir

Formatar

AutoSoma

Preencher

Limpar

Classificar e Filtrar

Localizar e Selecionar

Colar

Fonte

Alinhamento

Número

Formato Condicional

Formatar como Tabela

Estilos de Célula

Células

Edição

A1

pipe\_number

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
	pe_nur	positiv	WTmi	WTav	WTma	unique	ODmi	ODav	ODma	ection	hdt_faci	ov	ecc	avg_Ma	avg_Ma	Favg_M	avg_M	pv_MA	cc_MA	il						
920	31	700	22,4902	23,1902	23,684	DB2397 31	361,0883	361,6793	362,2702	1000	Tubosco	0,3268	5,1479													
921	31	800	22,4662	23,1902	23,6602	DB2397 31	361,1126	361,6709	362,2291	1000	Tubosco	0,3087	5,1487	23,1685	361,6808											
922	31	900	22,6644	23,125	23,5568	DB2397 31	361,1455	361,6921	362,2388	1000	Tubosco	0,3023	3,859	23,1377	361,6987											
923	31	1000	22,6756	23,098	23,5044	DB2397 31	361,2716	361,7332	362,1949	1000	Tubosco	0,2552	3,5882	22,9853	361,7189											
924	31	1100	22,7076	22,733	23,5028	DB2397 31	361,3442	361,7312	362,1183	1000	Tubosco	0,214	3,498	22,8547	361,7348											
925	31	1200	22,7076	22,733	23,5136	DB2397 31	361,3631	361,7398	362,1165	1000	Tubosco	0,2083	3,5455	22,733	361,7305											
926	31	1300	22,7076	22,733	23,5112	DB2397 31	361,3492	361,7205	362,0919	1000	Tubosco	0,2053	3,5349	22,861	361,716											
927	31	1400	23,0258	23,117	23,4592	DB2397 31	361,3091	361,6876	362,0661	1000	Tubosco	0,2093	1,8748	22,9885	361,6812	23,0543	361,6747	0,243	3,7927							
928	31	1500	22,8402	23,1154	23,55	DB2397 31	361,254	361,6356	362,0171	1000	Tubosco	0,211	3,0707	23,2245	361,6543	23,0685	361,6733	0,2407	3,6623							
929	31	1600	23,3124	23,4412	23,5712	DB2397 31	361,2423	361,6398	362,0374	1000	Tubosco	0,2199	1,104	23,2054	361,6473	23,0691	361,6713	0,2388	3,5683							
930	31	1700	22,7748	23,0596	23,6946	DB2397 31	361,2484	361,6666	362,0848	1000	Tubosco	0,2313	3,9888	23,1439	361,6508	23,076	361,6656	0,2352	3,5243							
931	31	1800	22,6416	22,931	23,6102	DB2397 31	361,2489	361,6459	362,0429	1000	Tubosco	0,2196	4,224	23,0332	361,6462	23,0821	361,6553	0,2316	3,4947							
932	31	1900	22,6668	23,109	23,7798	DB2397 31	361,2466	361,6261	362,0056	1000	Tubosco	0,2099	4,8163	23,0495	361,629	23,1177	361,6449	0,229	3,4395							
933	31	2000	22,6436	23,1084	23,7886	DB2397 31	361,1851	361,6149	362,0448	1000	Tubosco	0,2377	4,9549	23,1159	361,6262	23,1505	361,644	0,228	3,3606							
934	31	2100	22,6568	23,1304	23,7056	DB2397 31	361,1201	361,6375	362,155	1000	Tubosco	0,2862	4,5343	23,2139	361,6368	23,1819	361,6257	0,2295	3,3477							
935	31	2200	23,0468	23,4028	23,794	DB2397 31	361,1297	361,6579	362,186	1000	Tubosco	0,2921	3,1928	23,2441	361,6451	23,1851	361,619	0,2306	3,4211							
936	31	2300	22,8004	23,199	23,6676	DB2397 31	361,1338	361,6399	362,146	1000	Tubosco	0,2799	3,7381	23,2768	361,635	23,1869	361,6143	0,2319	3,4148							
937	31	2400	22,893	23,2286	23,6362	DB2397 31	361,1575	361,6071	362,0567	1000	Tubosco	0,2487	3,1995	23,2059	361,6089	23,1652	361,6084	0,2342	3,518							
938	31	2500	22,893	23,1902	23,622	DB2397 31	361,2151	361,5797	362,1443	1000	Tubosco	0,2017	3,1436	23,2284	361,587	23,1688	361,6007	0,2357	3,4795							
939	31	2600	22,9844	23,2664	23,6058	DB2397 31	361,2579	361,5743	361,8907	1000	Tubosco	0,175	2,6708	23,2275	361,5767	23,1809	361,596	0,2375	3,4257							
940	31	2700	23,0304	23,2258	23,5788	DB2397 31	361,2286	361,576	361,9235	1000	Tubosco	0,1922	2,3612	23,2319	361,5824	23,1834	361,5921	0,2388	3,3303							
941	31	2800	22,8286	23,2036	23,604	DB2397 31	361,1855	361,5969	362,0082	1000	Tubosco	0,2275	3,3417	23,1981	361,5866	23,1871	361,5852	0,2355	3,2574							
942	31	2900	22,861	23,1648	23,5502	DB2397 31	361,1772	361,5868	361,9964	1000	Tubosco	0,2266	2,9752	23,1702	361,5827	23,1953	361,575	0,2266	3,1581							
943	31	3000	22,888	23,1422	23,5768	DB2397 31	361,1466	361,5644	361,9823	1000	Tubosco	0,2311	2,9764	23,1411	361,5679	23,1789	361,5649	0,2186	3,0891							
944	31	3100	23,01	23,1164	23,6232	DB2397 31	361,0948	361,5525	362,0102	1000	Tubosco	0,2532	2,6527	23,1241	361,5561	23,1823	361,5573	0,2136	2,9751							

217 de 3250 registros localizados

Contagem: 23

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Quebrar Texto Automaticamente

Formato CondicionalFormatar como TabelaEstilos de Célula

AutoSomaPreencherLimparClassificar e FiltrarLocalizar e Selecionar

ColarFonteAlinhamentoNúmero

Mesclar e Centralizar

Formato CondicionalFormatar como TabelaEstilos de Célula

InserirExcluirFormatar

Células

Área de Trabalho

S33

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
	uni	que	position	wt_min	wt_max	wt_avg	od_min	od_max	od_avg	ecc	ov	od_avg_ma	od_avg_ma	wt_avg_ma	wt_avg_ma	ecc_ma_col	ov_ma_col								
DB2	600,700,800	(22.5585994	(23.7236003	(23.1331996	(361.407012	(362.361999	(361.885009	(5.03604984	(0.26392900	(361.873504	(361.823638	(23.1434001	(23.1301994	(4.17552614	(0.20332099										
XX	100,1,200,1	04639,22.54	000641,23.6	006927,23.1	00061035,36	39929199,36	19995117,36	0928,4.8378	9894,0.2832	83374023,36	0002441,361	334961,23.1	879852,23.1	7442,3.9950	253,0.17400										
31	300,1,400,1	24003601,22	59998474,2	012001038,2	1.315002441	2.339996337	1.828002929	400803,4.22	149863,0.22	1.847320556	.8154907227	266002655,2	291999817,2	640202,3.98	07401,0.168										
	500,1,600,1	.6347999573	3.611000061	3.125,23.114	4.361.44100	9.362.26199	7.361.85198	14097977,3	68379927,0	6.361.84268	.361.810089	3.113399505	3.132453918	05219173,4	.0882126,0.1										
	700,1,800,1	.22.6567993	.23.5203990	0003204,23.	95215,361.4	34082,362.2	97461,361.8	7362599373	196608007,0	18848,361.8	1113,361.80	6,23.122867	5,23.137416	0510334969	708637029,0										
	900,2,000,2	.164,22.6646	936,23.4988	1296005249	920043945,3	030022927,3	479919434,3	3.606630086	1786710024	36342285,3	76782227,36	5842,23.129	8396,23.138	4.150780677	.1822793335										
	100,2,200,2	.003723,22.7	.002777,23.5	23.14559936	61.48599243	62.13198852	61.80899047	9.3.6775898	.0.11348299	61.80532836	1.804779052	7340393,23.	.092041,23.1	8.4.2405114	.0.20062917										
	300,2,400,2	.0079942,22	52000458,2	52,23.13940	16,361.5530	54,361.9639	85,361.7590	933,3.30345	68,0.080812	91,361.7713	7,361.80313	1382007599	432704926,2	174,4.33110	47,0.220969										
	500,2,600,2	.7675991058	3.531999588	04822,23.13	090332,361.	892578,361.	026855,361.	98827,2.938	9981,0.0650	318771,361.	11035,361.8	23.14046669	3.149347305	80933,4.328	364,0.23730										
	700,2,800,2	.22.8152008	.23.4950008	64002228,23	6000061035,	891998291,3	7460021973,	2300377,3.6	497004,0.04	7623291016,	037414551,3	01,23.12993	3,23.157133	0453682,4.3	68333,0.253										
	900,3,000,3	.057,22.7357	.392,23.5697	.1140003204	361.6640014	61.89898681	361.7820129	08200732,3	83896993,0	361.7706604	61.80227661	24036,23.13	1024,23.162	320741653,4	5354793,0.2										
	100,3,200,3	.997894,22.7	.994232,23.6	.23.1650009	648,361.696	64,361.8710	395,361.783	.8350999355	1089629978,	004,361.773	13,361.8044	84658813,23	6930237,23.	.1313646507	68990308,0										
	300,3,400,3	.588005066,2	.471996307,2	.155,23.1919	0144043,361	021973,361.	996582,361.	.4.82666015	0.201394006	9868164,361	73877,361.8	.156999588,	172946299,	.4.33579254	2859126329,										
	500,3,600,3	.2.63139154	3.750799179	994354,23.1	.558013916,	953002929,	7560119629,	62,5.347750	6,0.3192670	.7736816406	094787598,3	23.16773414	23.18146705	15,4.361440	0.302940219										
	700,3,800,3	.7,22.336600	1.23.774400	462001801,2	361.4159851	362.1449890	361.7810058	1869,5.4070	047,0.43917	.361.769012	61.81146240	61,23.18293	63,23.19065	1817,4.3569	6,0.3190192										
	900,4,000,4	.1129,22.621	.7111,23.875	3.210599899	074,361.192	137,362.347	594,361.769	100784,5.59	70065,0.505	4512,361.77	23,361.8121	38074,23.19	28473,23.19	526672,4.35	282,0.33489										
	100,4,200,4	.0002899,22	.9994507,23	.3.23.234399	9931641,360	9919434,362	9890137,361	9460125,4.9	7319999,0.5	76794434,36	948242,361.	70672607,23	70005035,23	21385193,4	32862,0.350										
	300,4,400,4	.600409247,	.901396124,	.7955,23.25,2	.9869995117	.5759887695	.782012935	901099205,5	08991003,0.	1.787994384	8166809082,	.2316665649	.2038669586	354706468,	7457078,0.3										
	500,4,600,4	.22.66500091	.23.82519912	.3.236999511	.360.897003	.362.726989	.361.812011	.0454001427	5264409781,	8,361.81900	361.8244018	.23.2404670	.23.2076530	4.371625900	681690395,0										
	700,4,800,4	.55,22.63719	.72,23.80960	.72,23.254999	.1738,360.94	.7461,362.78	.7188,361.86	.4.5272002	.0.51503700	.02441,361.8	.555,361.829	.715,23.2473	.457,23.2132	.3,4.3365387	.3841132522										
	900,5,000,5	.94019,22.69	.08001,23.74	.1608,23.252	.10095215,36	.2899502,36	.30065918,36	.2,4.5878300	.2.04806729	.58689355,3	.2541504,361	.33526,23.6	.26184,23.2	.9174,4.35028	.0.39191487										
	100,5,200,5	.6199417,22.3	.00050493,23	.79998728,23	.0194186804	.849684863	.1894896013	.667,4.12096	83,0.45202	61.88699390	.8290710449	.482662201,2	.16080897,2	.3194,4.384	.40,3.92561										
	300,5,400,5	.6555995941	.7224006653	.2518005371	.360.971008	.362.834991	.7361.90301	.97723,3.539	.19862,0.419	.82,361.8933	.361.827453	.3.253200531	.3.216867446	.6845627,4.2	.8529,0.3864										

Sheet1

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Arquivo

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P51																
	B	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
	uni	position	wt_min	wt_max	wt_avg	od_min	od_max	od_avg	ecc	od_avg_ma_col_drift	od_avg_ma_col_drift	wt_avg_ma_col_drift	wt_avg_ma_col	ecc_ma_col	ov_ma_col	
1																
DB2	600,700,800	(23.2444000)	(23.784000)	(23.416000)	(360.226013)	(362.338012)	(361.282012)	(2.30440998)	(0.58451098)	(361.315002)	(361.456878)	(23.3736991)	(23.3482944)	(3.3711785)	(0.57406068)	
397	900,1,000,1,244	(23.0855)	367,23.6758	662,23.3313	1836,36.3013	6953,36.232	9395,36.134	08,2.529639	2,0.5387219	4414,36.136	6621,36.145	882,23.3675	354,23.3504	86,3.350358	70,0.567613	
XX	100,1,200,1,	999993,23.0	00325,23.0	999176,23.0	5,360.51300	1014044,36.3	79919434,36.3	9593,3.0451	787,0.53087	76757812,36.3	57800293,36.3	327301,23.3	447937,23.3	963,3.28913	4229,0.5593	
22	300,1,400,1,	886001587,2	998008728,2	55198138,2	04883,36.2	2,432.00830	1,47299134	500416,2.9	40139,0.586	1,44732660	1,45251460	10333252,23.3	447208405,2	68866,3.275	97104,0.594	
	500,1,600,1,	0120399673	3661800384	3,244400000	06998535,2	4,362.58300	4,361.52099	37070127,38	9759917,0.5	2,3651.5223	4,361.43981	-307800293	3,34517451	9137154,32	94666339,0	
	100,1,800,1,	5,22.90800	8,23.80260	4,23.32379	60,48901367	78125,362.6	60938,361.5	355801105,4	997719765,0	88672,361.6	93359,361.4	23,32966613	5,23.35309	46160372,2	5248385668,	
	900,2,000,2,	946,22.9050	8606,23.919	1333,23.420	19,360.4760	57989502,36	729980469,3	3294801712	5745819807	360107422,3	302368164,3	77,23.35393	823,23.3528	2988231182	0.505800510	
	200,2,200,2,	006866,22.8	0006256,23	799255,23.4	131836,36.0	2,553009003	61,51400756	4,6662991	0,59311300	61,51800537	61,42421485	33344,23.37	156281,23.3	3,36676239	6,0419947	
	300,2,400,2,	915996552,2	9330005646,	317199707,2	3949890137,	2,362.53900	84,361.4670	5,6656110	5,02.583936	11,361.4859	35,361.4178	17327118,2	386202349,2	85,3.474699	0.688,0.4092	
	500,2,600,2,	2.993799209	23.8505928	377719173	360,420989	14648,36.2	10498,36.14	1112,3.1838	9893,0.5160	924316,36.1	46679,36.1	354133606,	3,602014233	3403,3.6375	30566,0.4863	
	700,2,800,2,	6,23.027399	38,23.77140	23,3686000	902,360.514	3201,2399538	768997461	4,40064,2.7	340071,0.48	463635645,	4127917269	23,34613418	42,3.358707	174522,3.76	967345,0.35	
	900,3,000,3,	0631,23.003	04517,23.0	305,23.2931	0075684,36.0	2,32.7899780	61,446999016	8041062,3	54499996,0	36,44199051	48144,36.2	58,23.35986	428,23.3662	89347267,3	528517425,0	
	300,3,200,3,	1999969,23	10002136,23	995932,23.4	5459899002	27,362.299	68,361.4230	1436800957,	3939420005,	27,361.3943	258,361.340	70959,23.30	261963,23.3	817941272,	443166136	
	300,3,400,3,	0631999969,	7994003296	18398108,2	3,60.591103	87793,36.0	61,0504,36.1	2,918930053	0,304749995	481445,36.1	196532,36.1	10668182,2	67839813,2	3,862947225	0.42857652	
	500,3,600,3,	23.12120056	23.8304000	3,317591957	148,360.773	33996582,36	3129882812,	7,3.9307200	5,0.2774020	3356682129,	4143981934	3788007965	3,380292892	6,3.7849845	0.9,0.416680	
	700,3,800,3,	12.12293937	397,23.8472	4,23.349399	9868164,36.0	1,876007080	361,32501122	90,4.24947	30,0.31246	361,3299865	361,0404327	23,3832664	52,3.392679	886,3.79547	005,0.40785	
	900,4,000,4,	6994,23.033	003937,23.9	5667,23.428	8500061035	1,361.85299	87,361.3519	023934,3.987	09888,0.325	723,361.337	3926,36.319	47,23.38866	215,23.390	1067,3.767	0.36290,3.399	
	100,4,200,4,	91991882,22	318008423,	8005829,23	360,770996	86262,36.1	87,361.3519	218180,4.5	9199858,03	3413086,36.1	367188,36.2	6153,23.403	2397156,23	7140226,36.3	3014629,0.3	
	400,4,400,4,	804599762,	3971000671	3878002167,	0938,36.075	999938965,3	3349914551,	57799914,1	300159872,0	3426818848	1,378540009	33663629,23	3953208923,	026954174,4	986856639,0	
	500,4,600,4,	22.84280014	4,23.952999	23.39340019	29907227,36	61,92999267	361,3410034	3,500897917	3,721469939	361,346984	1,361.36999	4084663391,	23.3947672	04905653,4	0.403711375	
	700,4,800,4,	04,22.963339	115,0.0186	23,23.44420	0796012451	58,361.9609	18,361.3649	3,78025007	0,38559969	8633,36.136	51172,36.13	23,40566653	61,23.39021	2154312134,	0.408010152	
	900,5,000,5,	98981,22.96	00449369,23	05157,23.38	2,360.74041	08532,36.02	902344,36.1	25,3.688124	06,0.368124	0992344610	6,3617885887	13,23.41826	10127,23.347	4,372716903	10,0.413876	
2	500,5,200,5,	41957660	049995728,2	94002533,23	00098,36.00	9400112305,	3770141602,	938,2.66679	9917,0.4208	1,376007080	61,39394287	62964,23.342	10257721,23	7,4.5038048	3249,0.42878	



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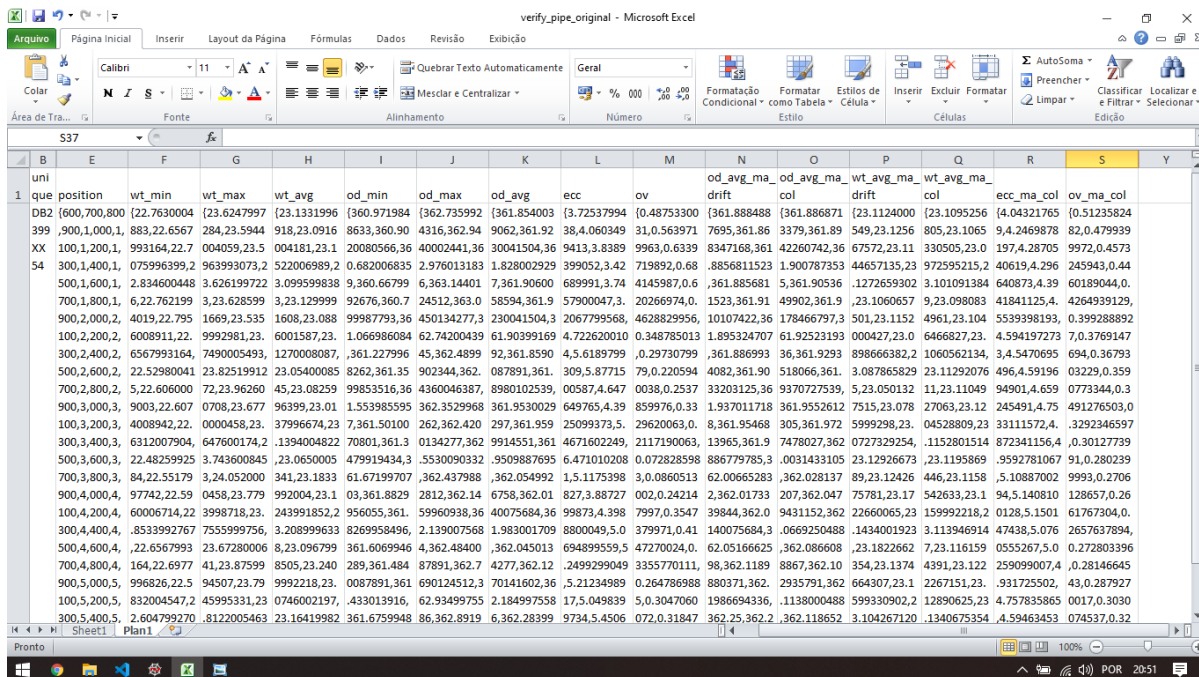
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	B	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Y
	uni	que	position	wt_min	wt_max	wt_avg	od_min	od_max	od_avg	ecc	ov	od_avg_ma	od_avg_ma	wt_avg_ma	wt_avg_ma	ecc_ma_col	ov_ma_col
399	DB2	399	900,1,000,1,	883,22,6567	284,23,5944	918,23,0916	8633,360,90	4316,362,94	9062,361,92	38,4,060349	31,0,563971	7695,361,86	3379,361,89	549,23,1256	805,23,1065	9,4,2469878	82,0,479939
XX	100	1,200,1,	993164,22,7	004059,23,5	004181,23,1	20080566,36	40002441,36	30041504,36	9413,3,8389	9963,0,6339	8347168,361	42260742,36	67572,23,11	330505,23,0	197,4,28705	9972,0,4573	
54	300	1,400,1,	075996399,2	963993073,2	522006989,2	0,682006835	2,976013183	1,8288002929	399052,3,42	719892,0,68	8856811523	1,900787353	44657135,23	972595215,2	40619,4,296	245943,0,44	
	500	1,600,1,	2,834600448	3,626199722	3,099599838	9,360,66799	6,363,14401	7,361,90600	689991,3,74	4145987,0,6	361,885681	5,361,90536	1,272659302	3,101091384	640873,4,39	60189044,0	
	700	1,800,1,	6,222762199	3,23,628599	3,23,129999	92676,360,7	24512,363,0	58594,361,9	57900047,3	20266974,0	1523,361,91	49902,361,9	23,1060657	9,23,098083	41841125,4	4264939129	
	900	2,000,2,	4019,22,795	1669,23,535	1608,23,088	99987793,36	450134277,3	230041504,3	2067799568	4628829956	10107422,36	178466797,3	501,23,1152	4961,23,104	5539398193	0,399288892	
	100	2,200,2,	6008911,22	9992981,23	6001587,23	1,066986084	62,74200439	61,90399169	4,722620010	0,348785013	1,895324707	61,92523193	000427,23,0	6466827,23	4,594197273	7,0,3769147	
	300	2,400,2,	6567993164	7490005493	127008087	361,227996	45,362,4899	92,361,8590	4,5,6189799	0,29730799	361,886993	36,361,9293	898666382,2	1060562134	3,4,5470695	694,0,36793	
	500	2,600,2,	22,52980041	23,82519912	23,05400085	8262,361,35	902344,362	087891,361	309,5,87715	79,0,220594	4082,361,90	518066,361	3,087865829	23,11292076	496,4,59196	03229,0,359	
	700	2,800,2,	5,22,606000	72,23,96260	45,23,08259	99853516,36	4360046387	8980102539	00587,4,647	0038,0,2537	33203125,36	9370727539	5,23,050132	11,23,11049	94901,4,659	0773344,0,3	
	900	3,000,3,	9003,22,607	0708,23,677	96399,23,01	1,553985595	362,3529968	361,9530029	649765,4,39	859976,0,33	1,937011718	361,9552612	7515,23,078	27063,23,12	245491,4,75	491276503,0	
	100	3,200,3,	4008942,22	0000458,23	37996674,23	7,361,50100	262,362,420	297,361,959	2509937,35	29620063,0	8,361,95468	305,361,972	5999298,23	04528809,23	33111572,4	3,3292364597	
	300	3,400,3,	6312007904	647600174,2	1394004822	70801,361,3	0134277,362	9914551,361	4671602249	2117190063	13965,361,9	7478027,362	0727329254	1,152801514	872341156,4	0,30127739	
	500	3,600,3,	22,48259925	3,743600845	23,0650005	479919434,3	5530090332	9509887695	6,471010208	0,072828598	886779785,3	0031433105	23,12926673	23,1195869	5992781067	91,0,280239	
	700	3,800,3,	84,22,55179	3,24,052000	341,23,1833	61,67199707	362,437988	362,054992	1,5,1175398	3,0,0860513	62,00665283	362,028137	89,23,12426	446,23,1158	5,10887002	9993,0,2706	
	900	4,000,4,	97742,22,59	0458,23,779	992004,23,1	03,361,8829	2812,362,14	6758,362,01	827,3,88727	002,0,24214	2,362,01733	207,362,047	77581,23,17	542633,23,1	94,5,140810	128657,0,26	
	100	4,200,4,	60006714,22	3998718,23	243991852,2	956055,361	59960938,36	40075684,36	99873,4,398	79971,0,3547	39844,362,0	9431152,362	22660065,23	159992218,2	0128,5,1501	61767304,0	
	300	4,400,4,	8533992767	7555999756	3,208999633	8269958496	2,139007568	1,983001709	8800049,5,0	79971,0,3547	140075684,3	0669250488	1434001923	3,113946914	47438,5,076	265763894	
	500	4,600,4,	22,6567993	23,67280006	8,23,096799	361,6069946	4,362,48400	362,045013	694899559,5	47270024,0	62,05166625	362,086608	23,1822662	7,23,116159	0555267,5,0	0,272803396	
	700	4,800,4,	164,22,6977	41,23,87599	8505,23,240	289,361,484	87891,362,7	4277,362,12	2499299049	3355770111	98,362,1189	8867,362,10	354,23,1374	4391,23,122	259099007,4	0,28146645	
	900	5,000,5,	996826,22,5	94507,23,79	99922218,23	0087891,361	690124512,3	70141602,36	5,21234989	0,264786988	880371,362	2935791,362	664307,23,1	2267151,23	931725502	43,0,287927	
	100	5,200,5,	832004547,2	45995331,23	0746002197	433013916	62,93499755	2,184997558	17,5,049839	5,0,3047060	1986694336	1138000488	599330902,2	12890625,23	4,75783865	0017,0,3030	
	300	5,400,5,	2,604799270	8122005463	23,16419982	361,6759948	86,362,8919	6,362,28399	9734,5,4506	072,0,31847	362,25,362,2	362,118652	3,104267120	1340675354	4,59463453	074537,0,32	

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	uni															
	que	position	wt_min	wt_max	wt_avg	od_min	od_max	od_avg	ecc	ov	od_avg_ma_drift	od_avg_ma_col	wt_avg_ma_drift	wt_avg_ma_col	ecc_ma_col	ov_ma_col
1	DB2	(600,700,800	(22.8131999	(23.9172000	(23.3742008	(359.994995	(361.220001	(360.606994	(4.72315979	(0.33972498	(360.607513	(360.618621	(23.3640003	(23.2686252	(5.09878396	(0.37199649
398	990,1,000,1	969,22.7695	885,23.8476	209,23.3537	1172,359.96	2207,361.24	6289,360.60	4.615950107	77,0.354434	4277,360.60	8262,360.62	204,23.3526	594,23.2599	99,5.015502	21,0.373947	
100	1,200,1	999146,22.5	009369,23.9	998199,23.3	89941406,35	70092773,36	8001709,360	6.5,9871401	9968,0.3624	96801758,36	35656738,36	668549,23.2	105835,23.2	4529,5.0220	233,0.37600	
5	300,1,400,1	680007935,2	64799881,24	29999237,2	9.960998535	1.268005371	.6140136719	787,6.79102	959886,0.36	0.609344482	0.628814697	910671234,2	553405762,2	890045,5.22	99113,0.377	
	500,1,600,1	2.529800415	.1046009064	3.189399719	2.359,94299	1,361.26998	.360.605987	99301,6.347	80520058,0.	4,360.60699	3,360.63354	3.192934036	3.240327835	5083828,5.4	8197169,0.3	
	700,1,800,1	.22.5806007	.24.0443992	2,23.059400	31641,359.9	90137,361.2	5488,360.60	9499817,5.8	3801549971,	46289,360.6	49219,360.6	3,23.160667	1,23.234333	017724991,5	801085949,0	
	900,2,200,2	385,22.5610	615,23.9190	5585,23.233	150085449,3	860107422,3	10131836,36	450798988,2	0.386545002	176757812,3	362609863,3	4194,23.203	0383,23.221	.9494842918	3827794492	
	100,2,200,2	00824,23.00	006256,23.6	2000732,23.	59.94900512	61.34298706	0.645996093	.7524700165	5,0.3952789	60.62701416	60.63760375	2661438,23.	5538025,23.	.5,80026006	.0.38592922	
	300,2,400,2	55999756,22	473999023,2	317199707,2	7,359.92199	05,361.3469	8,360.63400	3.72748994	903,0.38928	02,360.6376	98,360.6409	2807331085,	2211284637,	7,5.8295421	69,0.389520	
	500,3,600,2	.8854007721	3.753599166	3.291799545	70703,359.9	848633,361.	26855,360.6	83,4.349249	49982,0.389	647949,360.	301758,360.	3.22639938	23.22702598	6,5.761401	1981,0.3962	
	700,3,800,2	.923.822200	3.23.190200	309997559,3	3349914551,	329956055,3	8398,5.0813	5330105,0.3	6433410645,	6440734863,	35,23.23206	6836,23.20	176,5.88652	19939,0.401		
	900,3,000,3	.402,22.7287	7751,23.908	8057,23.214	59.95999145	361.3649902	0.66299438	698769,7.25	45739865,0	360.6573181	360.6497192	71082,23.16	94565,5.709	7196596,0.4		
	100,3,200,3	998199,22.4	3995819,24.	1990662,23.	51,359.9639	344,361.388	48,360.6759	50301552,7.	.3959180117	152,360.673	383,360.656	48674011,23	89862823,23	2480659,5.4	076761305,0	
	300,3,400,3	293994904,2	1046009064,	0902004242,	892578,359.	0004883,361	94873,360.6	3453497887,	.040528601	3398438,360	6772461,360.	.1576004028	.213865356	835155553,5	.4132829905	
	500,3,600,3	2.411800384	24.11359977	23.16839981	967010498,3	.3949890137	809997559,3	7.913606188	41,0.414829	.6743469238	.6639404297,	23.1089324	23.2210807	.2965846062	.0.41840198	
	700,3,800,3	5,22.301200	72,24.12660	08,23.06819	59.93499755	.361.397003	60.66598510	3,8.4693098	9992,0.4268	.360.666992	.360.672210	931,23.1507	8,23.236574	.5,15682744	64,0.423776	
	900,4,000,4	8667,22.331	02655,24.29	91577,23.21	86,359.9060	1738,361.40	74,360.6539	068,6.23949	760085,0.43	1875,360.66	6934,360.68	39478,23.1	173,23.2398	98,5.272577	865,0.42933	
	100,4,200,4	6001892,22.	78000641,24	55990601,23	058594,359.	20080566,36	916992,360.	00322,5.422	9794004,0.4	79992676,36	02062988,36	977998626,2	662567,23.2	2858,5.2604	17199,0.436	
	300,4,400,4	5806007385,	.0349998474	.3096008301	9150085449,	1.454010009	6839904785,	1301079,4.7	402210116,0	0.675323486	0.684997558	3.255666732	320804596,2	74205,5.235	6937876,0.4	
	500,4,600,4	22.63139915	.23.8915996	.23.2418003	359.8948980	8,361.48098	360.6879882	717900276,3	.4369310141	3,360.68798	6,360.69152	8,23.255666	3.229986190	452652,5.12	450508654,0	
	700,4,800,4	47,22.75259	552,23.8603	082,23.2155	137,359.898	75488,361.4	812,360.691	.32791996,3.	.0.45184299	82812,360.6	83203,360.6	7328,23.284	8,23.236759	93244362,4.	.4528603256	
	900,5,000,5	.97162,22.99	992462,23.7	990601,23.3	0102539,359	859924316,3	986084,360.	4293398857,	35,0.452154	973266602,3	978759766,3	4657898,23.	1858,23.236	8931212425,	.0.46098172	
	100,5,200,5	83997345,22	776004272,2	959999084,2	9230041504	61,5.361.536	7120056152,	3.519690036	994,0.45693	60.70901489	60.70199584	3054676056,	6657257,23.	4.688286888	66,0.498832	
	300,5,400,5	.898399353,	3.697599411	3.304800033,	.359,90.7989	9873047,361	360.7229919	8,3.7487199	99953,0.467	26,360.7216	96,360.7067	23.33086586	2483329773,	7.4.4789304	8611,0.4758	

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	B	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Y
1	uni	que	position	wt_min	wt_max	wt_avg	od_min	od_max	od_avg	ecc	ov	od_avg_ma_drift	od_avg_ma_col	wt_avg_ma_drift	wt_avg_ma_col	ecc_ma_col	ov_ma_col
DB2	600,700,800	(22.6156005	(23.7490005	(23.0597991	(360.299987	(361.575988	(360.937988	(4.91505002	(0.35348498	(360.938995	(360.939880	(23.0741996	(23.0897006	(3.96906495	(0.36388999		
398	900,1,000,1	859,22.6313	493,23.8057	943,23.0886	793,360.295	7695,361.58	2812,360.94	98,5.086490	82,0.357203	3613,360.92	3711,360.93	765,23.0875	989,23.0895	09,4.039325	22,0.368157		
100	1,200,1	991547,22.5	994843,23.7	001587,23.1	0134277,360	49914551,36	00024414,36	1543,5.0540	9902,0.3688	56591797,36	89953613,36	339508,23.0	786285,23.0	7141,4.3146	7742,0.3705		
5	300,1,400,1	680007935,2	362003326,2	14200592,23	.233001709,	1.563995361	0.898986816	399551,4.22	209951,0.35	0.919006347	0.941101074	89799881,23	88640213,23	767616,4.62	660999,0.37		
17	500,1,600,1	2.653400421	3.640600204	.0666007996	360.2699890	3,361.56600	4,360.91799	9779911,3.2	91940105,0.	7,360.92300	2,360.94235	.0769002136	.0793819427	55245209,4.	2410804,0.3		
	700,1,800,1	1,22.767799	5,23.527000	23.0471992	137,360.316	95215,361.5	92676,360.9	941004662,2	3522019982,	41504,360.9	22949,360.9	.23.0674667	.23.0763664	919801712,5	733989894,0		
	900,2,000,2	3774,22.860	4272,23.551	493,23.0886	0095215,360	870056152,3	519958496,3	.9954199791	0.365797013	450073242,3	429016113,3	358,23.0960	246,23.0762	.0358629227	.3742866218		
	100,2,200,2	0006104,22.	5995026,23.	001587,23.1	.3039855957	61.625,361.6	60.96499633	.3.25926995	.0.36981698	60.95867919	60.94577026	674286,23.1	615204,23.0	.5,11153268	.0.37611499		
	300,2,400,2	8605995178,	6152000427,	523990631,2	.360.290985	260070801,3	79,360.9590	28,2.868370	87,0.384600	92,360.9573	37,360.9487	137332916,2	767860413,2	81,5.201340	43,0.377843		
	500,2,600,2	22.84160041	23.50419998	3.100200653	1074,360.25	61.64199829	148926,360.	0562,4.6014	0135,0.4023	364258,360.	915039,360.	3.113733291	3.078386306	6754,5.2546	7972,0.3815		
	700,2,800,2	21,82.60300	17,23.66539	1,23.088600	39978027,36	1,361.65798	9479980469,	099121,6.79	000002,0.39	3643195801,	9518127441,	6,23.089666	8,23.091613	114922,5.24	202713,0.38		
	900,3,000,3	06409,22.40	95514,23.97	1587,23.080	0.205993652	9502,361.66	360.9320068	2840004,7.7	22140011,0.	360.9466552	360.9540710	3666,23.071	7095,23.101	35193062,5.	50248754,0.		
	100,3,200,3	41996002,22	20001221,24	2001953,22.	3,360.25299	90063477,36	359,360.959	34000206,8	3908579946,	734,360.949	449,360.955	8665314,23.	1199951,23.	2507362366,	3870682716,		
	300,3,400,3	.2759990692	.0538005829	9867992401,	07227,360.2	1.660003662	9914551,360	1568498611,	0.384268999	005127,360.	2001953,360	0367336273,	1018657684,	5.374810218	0.388824254		
	500,3,600,3	.22.2504005	.24.1299991	23.04319953	5,360.25601	1,361.64300	.9549865723	6.428599834	1,0.3849380	9546813965,	.9595947266	23.03499984	23.10762596	8,5.5574798	3,0.3896872		
	700,3,800,3	432,22.4501	608,23.9335	92,23.07500	19629,360.2	53711,361.6	.360.949005	4,6.0952401	016,0.39988	360.9613342	360.962921	74,23.06726	13,23.11038	584,5.63310	103,0.38978		
	900,4,000,4	991272,22.5	99472,23.98	07629,23.08	850036621,3	74987793,36	127,360.980	161,6.45865	39855,0.402	285,360.972	1426,360.96	46462,23.08	58948,23.11	8139,5.6251	374,0.39213		
	100,4,200,4	755996704,2	25992584,24	35990906,23	60.2669829	1.709991455	010983,360	01122,5.714	0470083,0.4	3205566,360	53320312,36	64658356,23	43875122,23	077652,5.68	75871,0.395		
	300,4,400,4	2.541999816	.0340003967	.1007995605	1,360.26800	1,361.72000	.9880065918	1089876,4.9	086320102,0	.9873352051	0.969146728	.1475334167	.1186008453	53914261,5.	.4663277,0.3		
	500,4,600,4	9,22.580600	.23.9095993	.23.2581996	53711,360.2	12207,361.7	.360.993988	201102257,5	.4097729921,	360.984680	5,360.97305	.23.1967334	.23.1233997	63256073,5.	980731368,0		
	700,4,800,4	7385,22.682	042,23.8251	918,23.2311	349853516,3	099914551,3	0371,360.97	.1622900963	.0.39947199	1758,360.97	29785,360.9	747,23.2049	345,23.1264	485707283,5	4007866085		
	900,5,000,5	1994781,22.	991272,23.7	992645,23.1	60.21701049	61.69601440	19848633,36	.6,14089012	82,0.385533	43347168,36	764709473,3	331665,23.1	93454,23.12	.3495335579	.0.40237340		
	100,5,200,5	5552005768,	490005493,2	254005432,2	8,360.24398	43,361.6860	0.957000732	15,6.034150	9885,0.3651	0.964660644	60.97933959	698665619,2	9119873,23.	.5,22846651	33,0.403727		
	300,5,400,5	22.4660041	3.888399124	3.152999877	80371,360.2	046387,361.	4,360.96499	1236,4.1298	460111,0.36	5,360.96334	96,360.9791	3.122333526	1409873962,	08,5.250379	2632,0.4050		

100%

POR 2048

The image displays two Microsoft Excel spreadsheets side-by-side. The left spreadsheet, titled 'collapse\_data\_aramis\_original', shows a table with columns A and B. Column A contains integers from 0 to 24, and column B contains corresponding numerical values. The right spreadsheet, titled 'Pasta1', shows a table with columns A and B. Column A contains alphanumeric codes (e.g., DB2397 XX 31), and column B contains numerical values. Both spreadsheets have the same ribbon interface and status bar.

A	B
0	11227,4407
1	11243,6631
2	11055,9331
3	11117,7941
4	10814,2228
5	10825,9139
6	10748,8795
7	11004,7627
8	11141,298
9	11105,6676
10	10854,6321
11	11163,6078
12	11170,8553
13	10855,8561
14	11167,5935
15	11120,2499
16	11228,3904
17	11134,6436
18	11105,9047
19	11300,2521
20	11157,5237
21	11048,5695
22	11388,3689
23	11322,8145
24	11217,8278

A	B
DB2397 XX 31	11.621.222
DB2397 XX 32	11.382.955
DB2399 XX 53	
DB2399 XX 52	11.383.246
DB2399 XX 34	
DB2399 XX 36	
DB2399 XX 48	
DB2399 XX 51	
DB2399 XX 56	
DB2397 XX 33	10.792.374
DB2397 XX 19	
DB2398 XX 1	
DB2397 XX 20	10.692.847
DB2397 XX 28	11.404.565
DB2398 XX 11	11.505.283
DB2398 XX 15	114.370.625
DB2398 XX 3	11.663.441
DB2398 XX 8	11.888.009
DB2399 XX 39	11175.35
DB2399 XX 43	11.358.847
DB2399 XX 47	10.782.867
DB2399 XX 55	11.295.834
DB2397 XX 23	11.480.675
DB2399 XX 46	11.206.216

Executar as mesmas etapas anteriores com os arquivos vstar

- [119098\\_14inch\\_VM125HC\\_compiled\\_wt.xlsx](#)
- [119098\\_14inch\\_VM125HC\\_compiled\\_od.xlsx](#)

1. Ler arquivos nos códigos 'original' versão do Versiani e executar o verify\_pipe realizando as conversões de unidade

- Não conseguimos rodar o arquivo no código original para validação. Esta dando erro na leitura e tipagem do arquivo