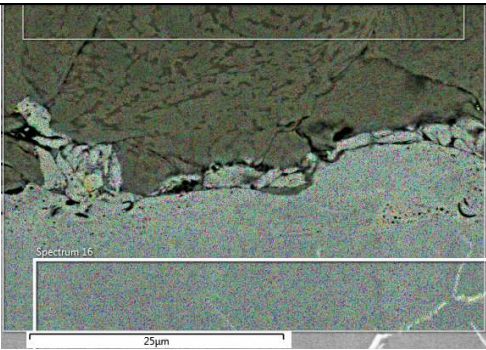
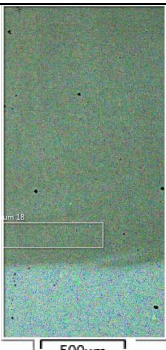
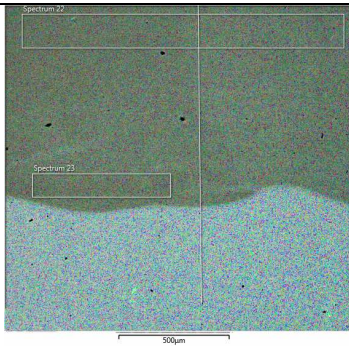
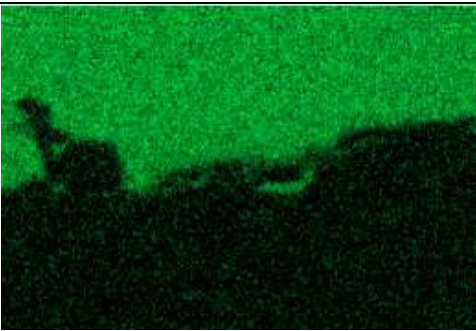
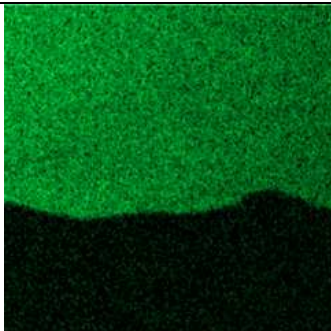
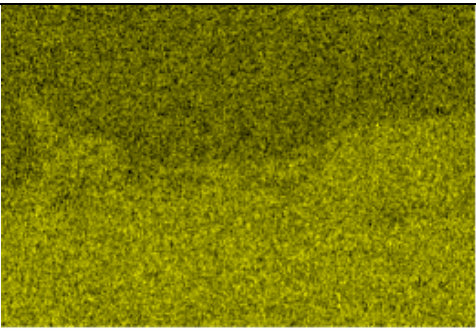
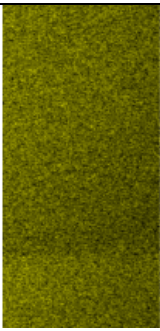
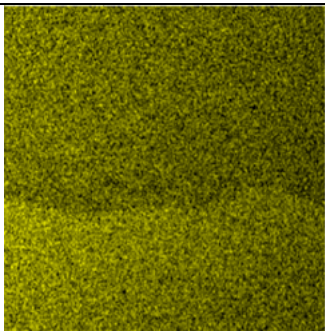
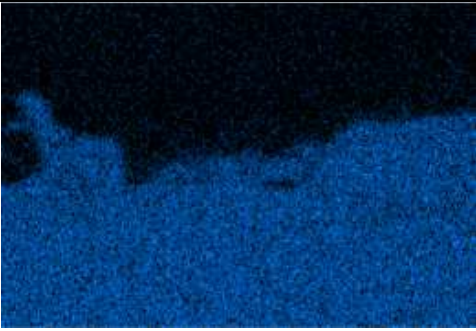
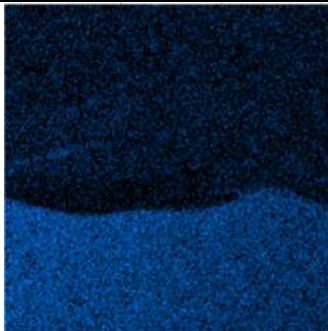
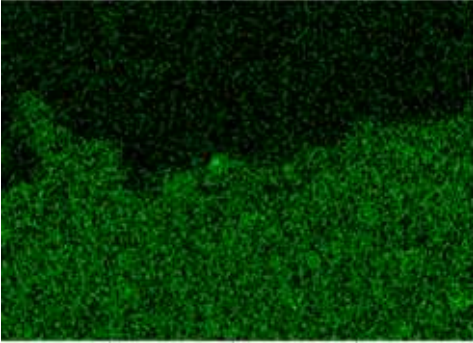
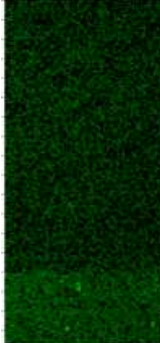
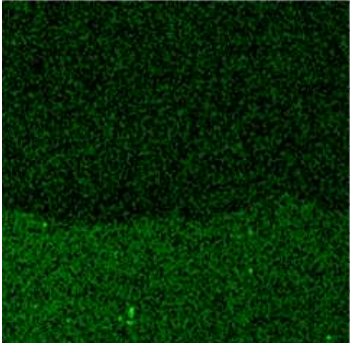
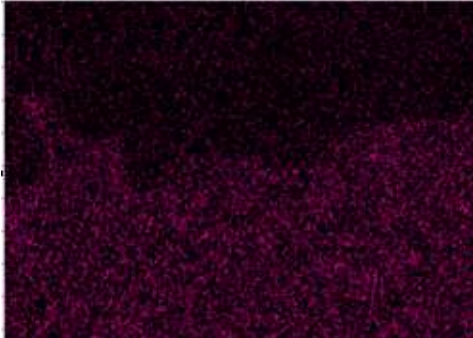
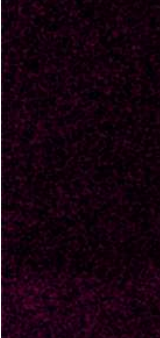
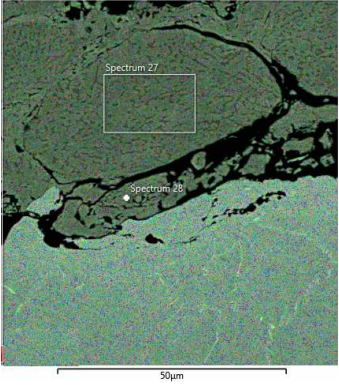
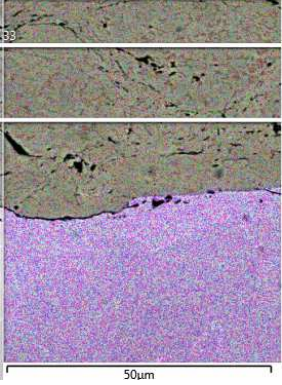
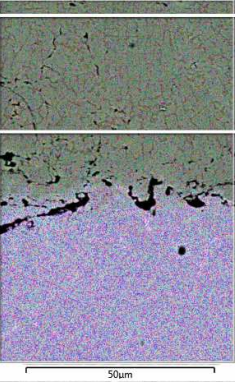
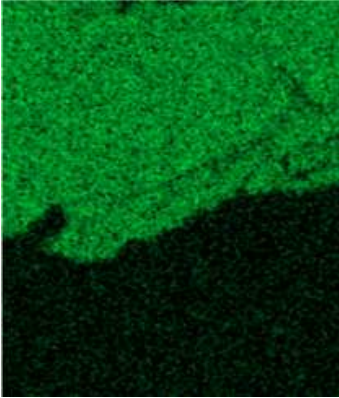
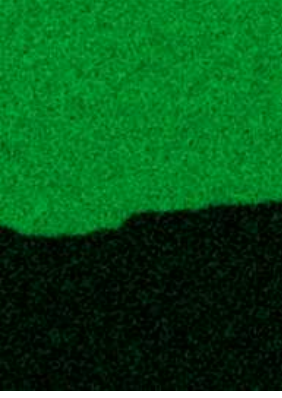
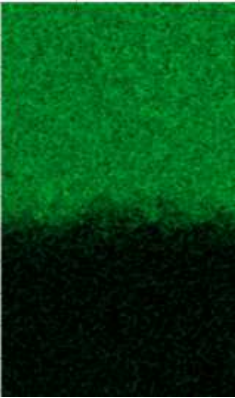
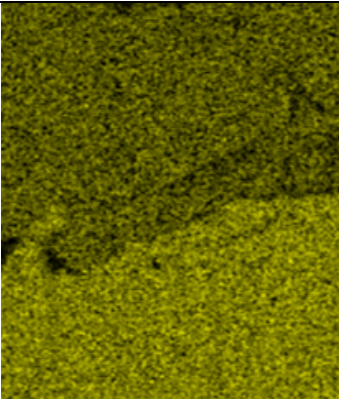
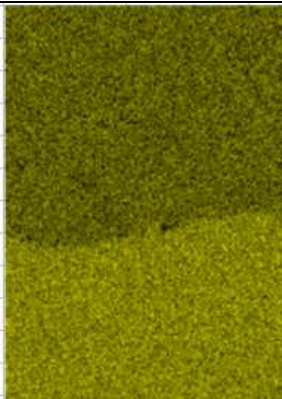
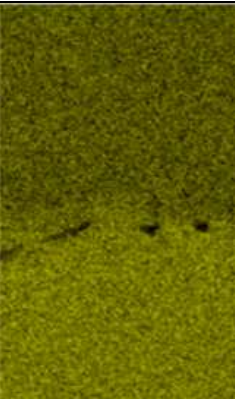


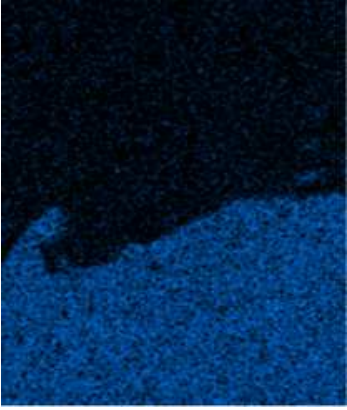
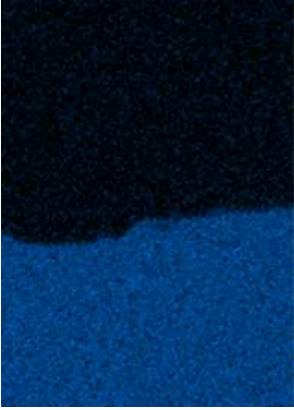
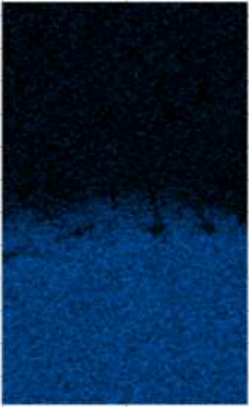
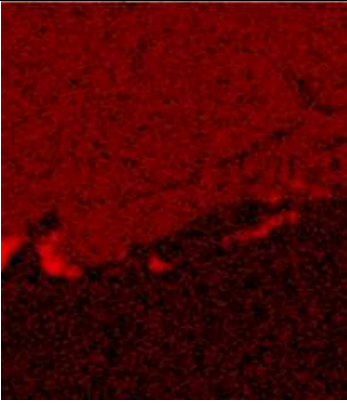
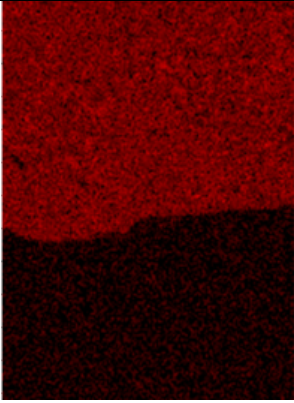
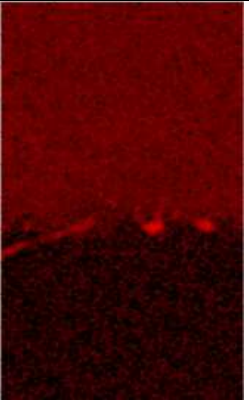
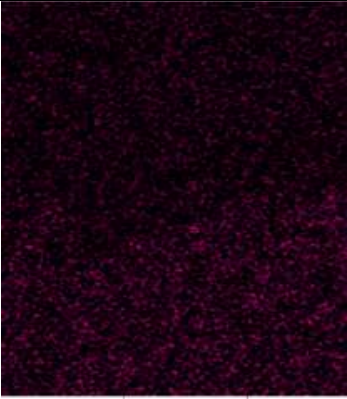
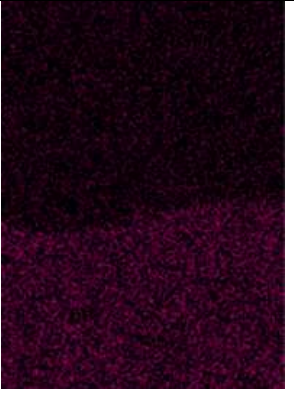
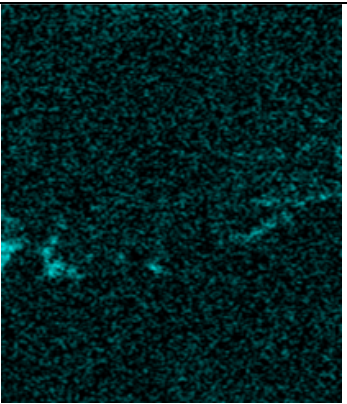
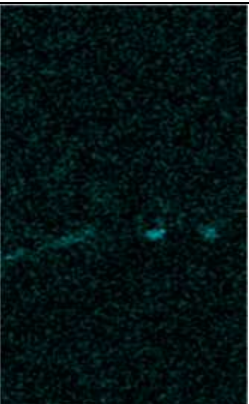
# Příloha 1 – EDS mapování

| EDS mapování vzorku naneseného CS metodou |                                                                                     |                                                                                     |                                                                                      |
|-------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                                           | CS A                                                                                | CS B                                                                                | CS C                                                                                 |
| Oblast mapování                           |    |    |    |
| Co (K)                                    |   |   |   |
| Ni(K)                                     |  |  |  |
| Fe (K)                                    |  |  |  |

|        |                                                                                   |                                                                                   |                                                                                    |
|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Nb (L) |  |  |  |
| Mo (K) |  |  |  |



| EDS mapování vzorku naneseného HVOF metodou |                                                                                     |                                                                                     |                                                                                      |
|---------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                                             | HVOF A                                                                              | HVOF B                                                                              | HVOF C                                                                               |
| Oblast mapování                             |    |    |    |
| Co (K)                                      |   |   |   |
| Ni(K)                                       |  |  |  |

|                    |                                                                                     |                                                                                     |                                                                                      |  |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--|
| Fe (K)             |    |    |    |  |
| Al (K)             |   |   |   |  |
| Mo (K)             |  |  |  |  |
| O <sub>2</sub> (K) |  |                                                                                     |  |  |

## Příloha 2 – Tloušťky povlaků a porozita

| Tloušťka povlaku, popř. ovlivněné vrstvy u vzorků nanášených metodou CS a HVOF [μm] |                |              |             |             |             |
|-------------------------------------------------------------------------------------|----------------|--------------|-------------|-------------|-------------|
| CS A                                                                                | CS B           | CS C         | HVOF A      | HVOF B      | HVOF C      |
| 816                                                                                 | 1027           | 901          | 42          | 24          | 58          |
| 816                                                                                 | 948            | 933          | 63          | 56          | 51          |
| 748                                                                                 | 1105           | 905          | 16          | 50          | 63          |
| 834                                                                                 | 975            | 890          | 19          | 25          | 55          |
| 863                                                                                 | 1335           | 919          | 57          | 32          | 33          |
| 724                                                                                 | 1429           | 959          | 42          | 39          | 61          |
| 681                                                                                 | 1160           | 975          | 43          | 51          | 34          |
| 789                                                                                 | 1288           | 928          | 69          | 28          | 37          |
| 728                                                                                 | 1267           | 940          | 42          | 33          | 32          |
| 762                                                                                 | 1168           | 940          | 21          | 41          | 51          |
| 688                                                                                 |                | 824          | 30          | 28          | 34          |
| 629                                                                                 |                | 971          | 62          | 52          | 24          |
|                                                                                     |                |              | 46          | 40          | 30          |
|                                                                                     |                |              |             | 17          |             |
| <b>Ø 756</b>                                                                        | <b>Ø 1 170</b> | <b>Ø 923</b> | <b>Ø 42</b> | <b>Ø 37</b> | <b>Ø 43</b> |
| ± 70                                                                                | ± 160          | ± 41         | ± 17        | ± 12        | ± 14        |

| Porozita vzorků nanášených metodou CS a HVOF [%] |               |               |               |               |               |
|--------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| CS A                                             | CS B          | CS C          | HVOF A        | HVOF B        | HVOF C        |
| 0,12                                             | 0,05          | 0,01          | 6,97          | 6,13          | 1,58          |
| 0,05                                             | 0,09          | 0,04          | 2,81          | 1,42          | 1,90          |
| 0,09                                             | 0,07          | 0,03          | 5,10          | 1,87          | 0,27          |
| 0,08                                             | 0,04          | 0,02          | 6,97          | 1,71          | 1,78          |
| 0,15                                             | 0,06          | 0,02          | 1,08          | 2,03          | 1,61          |
|                                                  |               |               |               | 2,41          | 1,64          |
| <b>Ø 0,10</b>                                    | <b>Ø 0,06</b> | <b>Ø 0,02</b> | <b>Ø 4,59</b> | <b>Ø 2,60</b> | <b>Ø 1,46</b> |
| ± 0,04                                           | ± 0,02        | ± 0,01        | ± 2,60        | ± 1,76        | ± 0,59        |

### Příloha 3 – Povrchová drsnost

Drsnost vzorku HVOF C

| Ra [ $\mu\text{m}$ ] |                | Rz [ $\mu\text{m}$ ] |                 |
|----------------------|----------------|----------------------|-----------------|
| Směr 1               | Směr 2         | Směr 1               | Směr 2          |
| 6,499                | 11,270         | 30,97                | 44,470          |
| 8,279                | 10,510         | 33,06                | 45,630          |
| 4,822                | 9,532          | 26,58                | 48,110          |
| 8,065                | 6,659          | 31,54                | 38,590          |
| 5,293                | 7,245          | 20,01                | 33,660          |
| 3,679                | 11,050         | 15,7                 | 50,420          |
|                      | 8,471          |                      | 38,680          |
|                      | 6,939          |                      | 33,750          |
|                      | 9,040          |                      | 38,630          |
|                      | 6,863          |                      | 36,930          |
|                      | 8,507          |                      | 42,000          |
|                      | 8,370          |                      | 39,700          |
|                      | 7,934          |                      | 35,840          |
| <b>Ø 6,106</b>       | <b>Ø 8,645</b> | <b>Ø 26,310</b>      | <b>Ø 40,493</b> |
| <b>± 1,839</b>       | <b>± 1,574</b> | <b>± 7,028</b>       | <b>± 5,312</b>  |

Drsnost vzorku HVOF B

| Ra [ $\mu\text{m}$ ] |                | Rz [ $\mu\text{m}$ ] |                 |
|----------------------|----------------|----------------------|-----------------|
| Směr 1               | Směr 2         | Směr 1               | Směr 2          |
| 5,56                 | 5,412          | 29,07                | 26,74           |
| 6,616                | 4,905          | 31,17                | 26,61           |
| 6,005                | 4,859          | 34,91                | 28,06           |
| 5,431                | 6,451          | 28,6                 | 32,15           |
| 5,852                | 4,704          | 31,44                | 28,25           |
| 4,889                | 6,043          | 26,47                | 30,9            |
| <b>Ø 5,726</b>       | <b>Ø 5,396</b> | <b>Ø 30,277</b>      | <b>Ø 28,785</b> |
| <b>± 0,583</b>       | <b>± 0,712</b> | <b>± 2,911</b>       | <b>± 2,259</b>  |

Drsnost vzorku HVOF A

| Ra [ $\mu\text{m}$ ] |                | Rz [ $\mu\text{m}$ ] |                 |
|----------------------|----------------|----------------------|-----------------|
| Směr 1               | Směr 2         | Směr 1               | Směr 2          |
| 4,668                | 6,321          | 30,870               | 36,650          |
| 7,196                | 5,845          | 38,880               | 31,680          |
| 5,617                | 6,240          | 31,450               | 31,320          |
| 5,768                | 6,125          | 31,600               | 30,320          |
| 6,847                | 5,761          | 34,520               | 31,480          |
| 6,469                | 5,756          | 33,040               | 32,740          |
| <b>Ø 6,094</b>       | <b>Ø 6,008</b> | <b>Ø 33,393</b>      | <b>Ø 32,365</b> |
| <b>± 0,926</b>       | <b>± 0,252</b> | <b>± 2,995</b>       | <b>± 2,237</b>  |

Drsnost vzorku CS C

| Ra [ $\mu\text{m}$ ] |                | Rz [ $\mu\text{m}$ ] |                 |
|----------------------|----------------|----------------------|-----------------|
| Směr 1               | Směr 2         | Směr 1               | Směr 2          |
| 1,675                | 5,534          | 7,973                | 29,790          |
| 3,885                | 4,844          | 8,653                | 23,210          |
| 1,555                | 8,016          | 7,320                | 38,220          |
| 1,861                | 3,943          | 6,239                | 15,260          |
| 2,993                | 1,859          | 8,893                | 6,199           |
| 1,307                | 7,280          | 5,973                | 30,420          |
| 1,619                |                | 7,039                |                 |
| 1,632                |                | 6,280                |                 |
| <b>Ø 2,066</b>       | <b>Ø 5,246</b> | <b>Ø 7,296</b>       | <b>Ø 23,850</b> |
| <b>± 0,894</b>       | <b>± 2,246</b> | <b>± 1,122</b>       | <b>± 11,581</b> |

Drsnost vzorku CS B

| Ra [ $\mu\text{m}$ ] |        | Rz [ $\mu\text{m}$ ] |        |
|----------------------|--------|----------------------|--------|
| Směr 1               | Směr 2 | Směr 1               | Směr 2 |
| 2,867                |        | 10,190               |        |
| 3,093                |        | 8,960                |        |
| 3,977                |        | 15,840               |        |
| 3,374                |        | 21,120               |        |
| 1,444                |        | 7,280                |        |
| 1,663                |        | 10,840               |        |
| <b>Ø 2,736</b>       |        | <b>Ø 12,372</b>      |        |
| $\pm 0,991$          |        | $\pm 5,162$          |        |

Drsnost vzorku CS A

| Ra [ $\mu\text{m}$ ] |                 | Rz [ $\mu\text{m}$ ] |                 |
|----------------------|-----------------|----------------------|-----------------|
| Směr 1               | Směr 2          | Směr 1               | Směr 2          |
| 10,840               | 11,780          | 52,880               | 69,800          |
| 12,730               | 11,760          | 64,270               | 56,200          |
| 10,590               | 16,650          | 60,910               | 74,000          |
| 12,720               | 17,740          | 61,150               | 71,800          |
| 11,570               | 11,770          | 49,720               | 66,950          |
| <b>Ø 11,690</b>      | <b>Ø 13,940</b> | <b>Ø 57,786</b>      | <b>Ø 67,750</b> |
| $\pm 1,011$          | $\pm 2,996$     | $\pm 6,169$          | $\pm 6,959$     |

#### Příloha 4 – Tvrdost $H_{IT}$ a modul pružnosti $E_{IT}$

Tvrdost  $H_{IT}$  vzorků deponovaných metodou CS a HVOF [MPa]

| CS A           | CS B           | CS C           | HVOF A         | HVOF B         | HVOF C         |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 8 170          | 5 184          | 5 336          | 8 689          | 6 958          | 4 828          |
| 8 041          | 5 422          | 5 740          | 7 896          | 6 809          | 4 668          |
| 8 335          | 5 119          | 5 062          | 7 897          | 7 279          | 4 684          |
| 7 580          | 5 091          | 5 713          | 8 232          | 6 240          | 4 694          |
| 7 913          | 4 755          | 5 239          | 8 158          |                | 4 571          |
|                |                | 5 500          |                |                | 4 587          |
|                |                | 5 118          |                |                |                |
|                |                | 5 623          |                |                |                |
| <b>Ø 8 008</b> | <b>Ø 5 114</b> | <b>Ø 5 416</b> | <b>Ø 8 175</b> | <b>Ø 6 821</b> | <b>Ø 4 672</b> |
| $\pm 285$      | $\pm 239$      | $\pm 266$      | $\pm 325$      | $\pm 434$      | $\pm 92$       |

Modul pružnosti  $E_{IT}$  vzorků deponovaných metodou CS a HVOF [GPa]

| CS A         | CS B         | CS C         | HVOF A       | HVOF B       | HVOF C       |
|--------------|--------------|--------------|--------------|--------------|--------------|
| 163          | 191          | 202          | 164          | 172          | 155          |
| 161          | 194          | 203          | 168          | 179          | 185          |
| 192          | 193          | 212          | 182          | 196          | 183          |
| 160          | 193          | 204          | 178          | 189          | 191          |
| 178          | 181          | 217          | 178          |              | 177          |
| 161          |              | 200          |              |              | 194          |
|              |              | 199          |              |              |              |
|              |              | 207          |              |              |              |
| <b>Ø 169</b> | <b>Ø 191</b> | <b>Ø 206</b> | <b>Ø 174</b> | <b>Ø 184</b> | <b>Ø 181</b> |
| $\pm 14$     | $\pm 5$      | $\pm 6$      | $\pm 8$      | $\pm 11$     | $\pm 14$     |

## Příloha 5 – Vrypová zkouška

Lc<sub>1</sub> [N] vzorků deponovaných metodou HVOF

| HVOF A         |                | HVOF B         |                | HVOF C         |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| směr1          | směr2          | směr1          | směr2          | směr1          | směr2          |
| 26,70          | 24,80          | 23,10          | 22,77          | 63,81          | 71,65          |
| 24,43          | 17,20          | 20,49          | 26,43          | 62,07          | 69,96          |
| 24,02          | 24,66          | 22,86          | 30,41          | 42,69          | 54,99          |
|                |                | 22,06          | 24,64          |                |                |
| <b>Ø 25,05</b> | <b>Ø 22,22</b> | <b>Ø 22,13</b> | <b>Ø 26,06</b> | <b>Ø 56,19</b> | <b>Ø 65,53</b> |
| ± 1,44         | ± 4,35         | ± 1,18         | ± 3,26         | ± 11,72        | ± 9,17         |

Lc<sub>2</sub> [N] vzorků deponovaných metodou HVOF

| HVOF A         |                | HVOF B         |                | HVOF C |       |
|----------------|----------------|----------------|----------------|--------|-------|
| směr1          | směr2          | směr1          | směr2          | směr1  | směr2 |
| 76,16          | 53,05          | 86,68          | 75,22          | -      | -     |
| 76,65          | 59,06          | 83,15          | 76,33          |        |       |
| 67,03          | 59,36          | 80,84          | 75,82          |        |       |
|                |                | 92,92          |                |        |       |
| <b>Ø 73,29</b> | <b>Ø 57,16</b> | <b>Ø 85,90</b> | <b>Ø 75,79</b> | -      | -     |
| ± 5,43         | ± 3,56         | ± 5,26         | ± 0,56         | -      | -     |