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| ***MAKALE BİLGİSİ*** |  | **ÖZET** |
| ***Alınma:*** *01.02.2020****Kabul:*** *01.03.2020* |  | Bu çalışma aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa (özet kısmı en az 150 kelime, en fazla 250 kelime olmalıdır).  |
| ***Anahtar Kelimeler:****Delme**Optimizasyon**Kaplamalı takım**YSA**Toz metalurjisi* |  |
| **Article Title** |
| ***ARTICLE INFO*** |  | **ABSTRACT** |
| ***Received:*** *01.02.2020****Accepted:*** *01.03.2020* |  | This study aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa (*abstract should be minimum 150 words and maximum 250 words*). |
| ***Keywords:****Drilling**Optimization**Coated tool**ANN**Powder metallurgy* |  |

**1. GİRİŞ (INTRODUCTION)**

Metal malzemelerden makine parçası imalatında aaaaa aaaaa [1-3]. Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa [4,5].

Soğuk iş takım çelikleri aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

Özerkan [6], tornalamada oluşan yüzey pürüzlülüğü aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

**2. MATERYAL VE YÖNTEM (MATERIAL AND METHOD)**

**2.1. Deney Düzeneği** **(Experimental Setup)**

Bu çalışmada, AISI D3 (DIN 1.2080) soğuk iş takım çeliği aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

(Gerekli yerlerde şekil içinde şekil gösterimi yapılabilir. Şekilde içindeki kullanılan yazı boyutu makalede kullanılan yazı boyutundan (12 punto) büyük olmamalıdır.



Şekil 1. CNC torna ve deneysel ekipmanlar (CNC lathe and experimental equipment)

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

(Tablolarda dikey çizgiler kullanmaktan sakınınız. Tablo yazısı ile tablo arasında 6nk boşluk bırakınınız. Tabloda değişkenlerin yazı tipi “kalın” olmalıdır. Eğer varsa semboller “*italik*” yapılmalı ve parantez içerisinde gösterilmelidir.)

Tablo 1. SJ-210 marka yüzey pürüzlülük cihazı teknik özellikleri (Technical characteristics of SJ-210 brand surface roughness device)

|  |  |
| --- | --- |
| **Tarama ucu** | 2 μm |
| **Sürücü ünite hızı** | 0.25-0.5-0.75 mm/s |
| **Ölçüm kuvveti** | 0.75 mN |
| **Ölçüm mesafesi (*Z*)** | 360 μm (-200μm ile +160μm) |
| **Ölçüm uzunluğu (*L*)** | 0.08-0.25-0.8- 2.5-8 mm |

**2.2.** **İşparçası ve Takım Özellikleri (Workpiece and Tool Properties)**

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

**2.2.1** **Üçüncü derece alt başlık I (Third degree subtitle I)**

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

**2.2.2. Üçüncü derece alt başlık II (Third degree subtitle II)**

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

***Derece alt başlık I***

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

***Derece alt başlık II***

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

**3.** **DENEY VE OPTİMİZASYON SONUÇLARI (EXPERIMENT AND OPTIMIZATION RESULTS)**

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa. Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa



Şekil 2. Ortalama yüzey pürüzlülüğü için S/N oranları grafiği (S/N ratio plot for average surface roughness)

(Gerekli yerlerde şekil içinde şekil gösterimi yapılabilir. Şekildeki kullanılan yazı boyutu makalede kullanılan yazı boyutundan (12 punto) büyük olmamalıdır. Şekildeki kullanılan yazı tipi Times New Roman olmalıdır. Şekillerin dışında kenarlık kullanmaktan kaçınınız)

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

(Tablolarda dikey çizgiler kullanmakta sakınınız. Değişkenlerin yazı tipi “kalın” olmalıdır. Eğer varsa birimler “italik” yapılmalı ve bir satır aşağıda parantez içinde gösterilmelidir.)

Tablo 2. Yüzey pürüzlülüğü için ANOVA sonuçları (ANOVA results for surface roughness)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parametre**  | **SD**  | **KT**  | **KO** | **F**  | **P** | **PCR** *(%)* |
| **A**  | 1 | 19.301  | 19.301  | 24.95  | 0.000 | 4.94 |
| **B**  | 2 | 52.367  | 26.183  | 33.84  | 0.000 | 13.54 |
| **C**  | 2 | 294.369  | 147.184  | 190.25  | 0.002 | 78.02 |
| **Hata**  | 12 | 9.284  | 0.774  |   |   | 3.5 |
| **Toplam**  | 17 | 375.32  |   |   |   | 100 |

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

Şekil 1 (a) and (b)’den görülebileceği gibi, aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa. Formüller, Mathtype veya Microsoft denklem editörü kullanılarak yazılmalıdır. Aaaaa aaaaa… Eş.1’de verilmiştir;

|  |  |
| --- | --- |
| $$x=\frac{-b\pm \sqrt{b^{2}-4ac}}{2a}$$ | (1) |

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa (Eş.2).

|  |  |
| --- | --- |
| $$\cos(α)+\cos(β)=2\cos(\frac{1}{2}\left(α+β\right))\cos(\frac{1}{2}\left(α-β\right))$$ | (2) |

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

Tablo X’de, aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa. Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa

**4. SONUÇLAR (****CONCLUSIONS)**

Aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa.

**TEŞEKKÜR (ACKNOWLEDGMENT)**

(Çalışma araştırma kurumu veya fonu tarafından desteklenmiş ise destek sağlayan kurum/kuruluş adı ve proje numarası Kaynaklar bölümünden önce yazılmalıdır.) Bu çalışma Karabük Üniversitesi Bilimsel Araştırma Projeleri tarafından desteklenmiştir (Proje no: 20XX.XX.XX.001).

**KAYNAKLAR (REFERENCES)**

Metin içerisinde yer alan referanslar köşeli parantez içerisinde verilmelidir. Referanslar kaynaklar bölümünde aşağıda verilen formatlarda ve 11 punto olarak yazılmalıdır.

***Kaynak yazım örneği***

*Dergi makalesi:* Yazarın adının baş harfi(.) soyadı, makalenin tam başlığı, Derginin adı veya uluslararası kısaltması, cilt no(sayı): başlangıç-bitiş sayfa no, yıl.

1. M. Günay, İ. Korkut, E. Aslan, U. Şeker, Experimental investigation of the effect of cutting tool rake angle on main cutting force, Journal of Materials Processing Technology, 166(1): 44-49, 2005.
2. B. Özlü, M. Akgün, H. Demir, AA 6061 Alaşımının tornalanmasında kesme parametrelerinin yüzey pürüzlülüğü üzerine etkisinin analizi ve optimizasyonu, Gazi Mühendislik Bilimleri Dergisi, 5(2): 151-158, 2019.

*Kitap:* Yazarın adının baş harfi(.) soyadı, kitabın adı, cilt no, varsa editörü, yayınevinin adı, yayınlandığı yer, yıl.

1. E.M. Trent, Metal Cutting, 2nd ed., Butterworths, London, 1989.
2. M.C. Çakır, Modern Talaşlı İmalat Yöntemleri, 2. baskı, Dora Yayıncılık, Bursa, 2010.

*Kitaptan bir bölüm:* Bölüm yazarın adının baş harfi(.) soyadı, bölümün adı, kitabın adı, varsa editörü, yayınevinin adı, yayınlandığı yer, yıl.

1. D. Ulutan, T. Özel, Hard machining, Modern Manufacturing Processes, M. Koç, T. Özel (Eds.), John Wiley & Sons, Inc., New York, 2019.

*Konferans yayını:* Yazarın adının baş harfi(.) soyadı, tebliğin adı, kongrenin adı, gün/ay/yıl, yapıldığı yer.

1. A. Parlak, R. Kaçar, H. Ertek Emre, Adjoining of AA6033 Aluminum-AH36 Grade steel coupling with robotic GMAK method using transition plate, 4th International Conference on Engineering Technology and Applied Sciences, 24-28 April 2019, Kiev.
2. N. Yaşar, M.E. Korkmaz, M. Günay. CFRP kompozitlerin delinmesinde delme şartlarının ilerleme kuvveti ve delaminasyon üzerindeki etkilerinin incelenmesi, 7th International Symposium on Machining, 3-5 Kasım 2016, İstanbul.

*Standart:* Standard no, standardın adı, yayın yeri, yıl.

1. ASTM E8, Standard test methods for tension testing of metallic materials, ASTM International, 2004.

*Rapor:* Yazarın adının baş harfi(.) soyadı, raporun adı, şirket/kurum adı, yayınlandığı yer, yıl.

1. H.A. Soons, S.L. Yaniv, Precision in machining: research challenges, MD: National Institute of Standards and Technology, Gaithersburg, 2015.

*Tez:* Yazarın adının baş harfi(.) soyadı, tezin adı, cinsi (yüksek lisans, doktora), sunulduğu üniversite ve enstitüsü, şehir, ülke, yıl.

1. T. Meral, Paslanmaz çeliğin delinebilirliğinin deneysel ve nümerik olarak incelenmesi, Yüksek Lisans Tezi, Karabük Üniversitesi Fen Bilimleri Enstitüsü, Karabük, Türkiye, 2018.
2. M.W. Dixon, Application of neural networks to solve the routing problem in communication networks, Ph.D. Dissertation, Murdoch University, Murdoch, WA, Australia, 1999.

*Online kaynaklar:*Yazar(lar) veya sorumlu kurum, yayın başlığı, web sayfası, URL, erişim tarihi.

1. Texas Instruments, RS-422 and RS-485 Standards Overview and System Configurations, http://www.ti.com/lit/an/slla070d/slla070d.pdf, 20.12.2012.