```
[41.9969]
```

```
Round_HSS_Design(36,0.4,89.6,45,763.2,306.56)
```

```
begin
    Store=[]
    for i=1:10
        append!(Store, Round_HSS_Design(36,i*0.1,89.6,45,763.2,306.56))
    end
end
```

```
[8.28608, 18.0561, 29.2973, 41.9969, 56.1419, 66.7274, 77.6288, 88.4672, 99.2429, 109.956]
```

```
Store
```

Round_HSS_Design (generic function with 1 method)

```
function Round_HSS_Design(D,t,L,F_y,P,M)
    D_i=D-2*t
    A=pi/4*(D^2-D_i^2)
    S=pi/32*(D^4-D_i^4)/D
    Z=1/6*(D^3-D_i^3)
    I=pi/64*(D^4-D_i^4)
    r=sqrt(I/A)

    E=29000
    λ=D/t

    # Compression

    if λ<0.11*E/F_y
        A_ge=A
    else
        A_ge=(0.038*E/F_y/λ+2/3)*A
    end

    L_c=L*12
    F_e=pi^2*E/(L_c/r)^2

    if L_c/r<=4.71*sqrt(E/F_y)
        F_cr=0.658^(F_y/F_e)*F_y
    else
        F_cr=0.877*F_e
    end
    return([A_ge])
    P_n=F_cr*A_ge

    # Flexure
    if λ<0.07*E/F_y
        M_n=F_y*Z/12
    elseif λ<0.31*E/F_y
        M_n=min(F_y*Z,(0.021*E/λ+F_y)*S)/12
    else
        M_n=min(F_y*Z,0.33*E/λ*S)/12
    end

    P_c=P_n/1.67
    M_c=M_n/1.67


    # print(P_c)
    # print(" ")
    # print(M_c)

    if P/P_c>=0.2
    #   return P/P_c+8/9*M/M_c
    else
    #   return P/P_c/2+M/M_c
    end
end
```