```python
import numpy as np
from scipy.integrate import solve_ivp
import matplotlib.pyplot as plt


A = 7.7e-4
B = 7.53e-5
C = 5.6
D = 0.17


theta_and_theta_dot_0 = [0, 2]

def Dense_Equation(t, theta_and_theta_dot, ):
    theta, theta_dot = theta_and_theta_dot
    theta_ddot = 1/A*(B*theta_dot-C*theta+D)
    return [theta_dot, theta_ddot]


t_span = (0, 0.5)
t_eval = np.linspace(t_span[0], t_span[1], 100)

sol = solve_ivp(Dense_Equation, t_span, theta_and_theta_dot_0, t_eval=t_eval)

plt.figure(figsize=(12, 6))
plt.plot(sol.t, sol.y[0], label=r'$\theta(t)$')
plt.title(r'$A\ddot{\theta}-B\dot{\theta}+C-D=0$')
plt.xlabel('$t$')
plt.ylabel(r'$\theta(t)$')
plt.legend()
plt.grid(True)
plt.show()
```