

dq_to_abc.xbe

Attributes

```
xbe name=dq_to_abc evaluate=yes
Jacobian: variable
input_vars: d q cost sint
output_vars: a b c
aux_vars: alpha beta
iparms:
sparms:
rparms:
stparms:
igparms:
outparms: d q a b c
```

Description

dq_to_abc.xbe employs the following equations to relate d, q, cost, sint to a, b, c:

$$\alpha = d \cos t - q \sin t,$$

$$\beta = d \sin t + q \cos t,$$

$$a = \frac{2}{3} \alpha,$$

$$b = -\frac{1}{3} \alpha + \frac{1}{\sqrt{3}} \beta,$$

$$c = -\frac{1}{3} \alpha - \frac{1}{\sqrt{3}} \beta.$$