A large textile company is trying to decide which sludge dewatering process it should use ahead of its sludge drying operation. The costs associated with centrifuge and belt press systems are shown below. Determine which sludge dewatering process has the least cost on the basis of an annual equivalent worth (AEW) comparison at an interest rate of 12% per year.

<table>
<thead>
<tr>
<th></th>
<th>Centrifuge</th>
<th>Belt Press</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial cost, $</td>
<td>-260 000</td>
<td>- 160 000</td>
</tr>
<tr>
<td>Annual O&amp;M cost, $/year</td>
<td>-35 000</td>
<td>- 50 000</td>
</tr>
<tr>
<td>Salvage value, $</td>
<td>70 000</td>
<td>25 000</td>
</tr>
<tr>
<td>Life, years</td>
<td>7</td>
<td>5</td>
</tr>
</tbody>
</table>

**SOLUTION:**

\[
\text{AEW}_{\text{centrifuge}} = -260 000(\text{A/P, } 12\%, \ 7) -35 000 + 70 000(\text{A/F, } 12\%, \ 7) \\
= -260 000(0.2191) -35 000 + 70 000(0.0991) \\
= $-85 029
\]

\[
\text{AEW}_{\text{beltpress}} = -160 000(\text{A/P, } 12\%, \ 5) -50 000 + 25 000(\text{A/F, } 12\%, \ 5) \\
= -160 000(0.2774) -50 000 + 25 000(0.1574) \\
= $-90 449
\]

(Factors were taken from Table/p.887)

Select **centrifuge** sludge dewatering process according to its higher annual equivalent worth (AEW):

\[
\text{AEW}_{\text{centrifuge}} (-85029) > \text{AEW}_{\text{centrifuge}} (-90449)
\]

or as annual equivalent cost:

\[
\text{AEC}_{\text{centrifuge}} (85029) < \text{AEC}_{\text{beltpress}} (90449).
\]