BASIS—These refill units are tested in accordance with the procedures described in IEEE Standard C37.41, and they are rated to comply with IEEE Standard C37.46. As required by these standards, the minimum melting current is not less than 200% of refill-unit ampere rating, and the minimum melting curves are based on tests starting with the refill unit at an ambient temperature of 25°C (77°F) and no initial load.

CONSTRUCTION—Fusible elements are silver, helically coiled, and of solderless construction.

TOLERANCES—Curves are plotted to maximum test points. All variations are minus.

APPLICATION—As with all high-voltage fuses, these refill units are intended to accommodate overloads, not to interrupt them. Accordingly, they feature fusible elements designed with a minimum melting current of 200% of the refill-unit ampere rating (for refill units rated 100 amperes or less) or 220% of the refill-unit ampere rating (for refill units rated over 100 amperes). As a result, these refill units have considerable peak-load capabilities; however, they should never be exposed to loading in excess of the peak-load capabilities listed in S&C Information Bulletin 242-190.

Basis for Coordination: These refill units have silver element construction. They are not subject to damage by aging or transient overcurrents. They are also tolerant of temporary overloads, and they feature fusible elements of precise construction, allowing a minimum melting current of 200% of the refill-unit ampere rating (for refill units rated 100 amperes or less) or 220% of the refill-unit ampere rating (for refill units rated over 100 amperes). The refill units represented by these curves possess this short time interval feature because—having a non-damageable fusible element of precise construction—they require:

- As little as 10% total tolerance in melting current compared to the 20% tolerance of many fuses (20% and 40% respectively in terms of time)
- No "safety zone" or setback allowances

This narrow time band normally will provide the desired coordination. If the selected S&C Slow Speed refill unit does not meet the coordination requirements, check whether the same ampere rating in the S&C Standard Speed will satisfy. Sometimes a selected ampere rating will fail to meet the coordination requirements in any available speed. In this case, the selection of another ampere rating for either the protecting or protected fuse usually will satisfy all requirements.

Do not assume other fuses that do not use S&C’s silver, helically coiled fusible-element construction can better resolve a coordination impasse than the use of another ampere rating in one of the S&C speed options. Such other fuses, including “time-lag” speeds, “super-slow” speeds, and “high-surge” speeds, require the use of “safety zone” or setback allowances, and they have larger construction tolerances (plus 20% in current; plus 40% in terms of time). The application of these two factors will give a time interval between the adjusted minimum melting curve and the total clearing curve greater than in the case of S&C speed options.

**Refill Units Available**

<table>
<thead>
<tr>
<th>Refill Unit</th>
<th>kV Nom. Ratings</th>
<th>Ampere Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM-4® 25</td>
<td>25 and 34.5</td>
<td>15E through 200E</td>
</tr>
<tr>
<td>SM-5® 25</td>
<td>25 and 34.5</td>
<td>15E through 400E</td>
</tr>
</tbody>
</table>