**1 INTRODUCTION**

With Ruling #49/87/REV.A of June 24, 1987, you were informed that starting October 1, 1987, no initial inspection of a new escalator shall start unless that escalator type was subject to the testing and certification process, in accordance with clause 8.5 of CAN3-B44-M85, Elevator Safety Code.

We have recently been approached by an escalator manufacturer asking if a number of escalators could be inspected and licensed before the certification by a testing laboratory is completed.

Whilst the code requires type testing of several elevator components because their performance (e.g. free fail) or reliability (e.g. 100,000 cycles) cannot be tested during an initial inspection, we understand that the type testing requirement for escalator braking systems is introduced in the code for a different reason. The intent, as we understand, was to avoid inconvenience of performing full load tests on the initial inspection of every escalator, even though such tests could prove safety performance of escalator brakes.

**2 ORDER TO CONTRACTORS INSTALLING ESCALATORS**

Starting immediately, no escalator shall be licensed unless:

a) The order contained in Ruling #49/87/REV.A of June 24, 1987 has been complied with, OR

b) Conformance with requirements in clause 8.5.3 of Standard CAN3-B44-M85 has been demonstrated during the initial inspection of the escalator following the procedure set below.

**3 PROCEDURE FOR TESTING ESCALATOR BRAKES (Where No Type Test Certificate Is Available)**

**3.1 Design submission and inspection**

a) Design submission, requesting a variance from clause 8.11 of the B44 shall be registered;

b) No-load-minimum-stopping-distance, as specified in item 49.3 of registered specification sheet, must be at least 10% greater than the stopping distance stipulated in figure 14 of the B44 (Supplement 1/87!!), in order to allow for inaccuracy of field tests.

c) The field test shall be witnessed by an inspector. In addition to the initial inspection fee, a fee of $50. per manhour (presently under review) shall be charged for prolonged inspection, based on the duration of the brake tests (anticipated 2 to 4 hours).

**3.2 Checking of initial settings:**

a) Measure distance between skirt switch and combplate (D). This must be at least 10% greater than entry in item 49.4 of previously registered specification sheet.

b) Set brake torque at that stated in item 49.1 of spec sheet and check the setting applying the method described in item 49.2.
3.3 **Testing equipment**

a) Provide calibrated test weights necessary for loading in accordance with item 32. of spec sheet.

b) Install an auxiliary device (connected in the stop button circuit), which will automatically interrupt the power to the machine and brake when an index (M) marked on a step reaches a predetermined reference point (P), marked on the skirt, while the escalator is travelling down.

c) The stopping distances (between M and P) shall be measured by the movement of a step along its path of travel after the auxiliary device has initiated the stop.

3.4 **Tests**

a) **No-load running tests**

   Run empty escalator in down direction and arrange that the auxiliary device initiates stopping when index M reaches point P. Carry out at least 3 tests and measure stopping distance (DN). Installing contractor shall specify minimum "cooling-down" interval between tests. The shortest of the recorded distance (DN min.) must be equal to or greater than that shown in item 49.3 of the spec sheet (also see 3.1.b above). The longest recorded distance (DN max.) must not exceed DN min. for more than 10%.

b) **Static load test**

   Load escalator steps (steps on incline only) with "stopped brake rated load" specified in item 32 of spec sheet (clause 8.3.9.3(a) of B44). Check that there is no movement of steps.

c) **Rated-load running test**

   Load escalator with "Running brake rated load" specified in item 32 of spec sheet (clause 8.3.9.3(b) of B44).

   The load must be placed on the incline portion of escalator steps (equally distributed or concentrated on the upper steps).

   Run the loaded escalator in down direction and arrange that the auxiliary device initiates stopping when index M reaches reference point P.

   Carry out at least 3 tests and measure stopping distance (DR). The installing contractor shall specify the minimum "cooling down" interval between tests.

   The longest recorded distance (DR max.) must not exceed the shortest distance (DR min.) by more than 10%, and must be equal to or less than entry in item 49.4.

3.5 **Readjustments**

If any test results prove non-conformance with the above requirements, the escalator will not be licensed. If any readjustment is carried out during the test, e.g. the initial torque setting (see 3.2(b) above) tests shall be repeated and a revised specification sheet shall be submitted for registration.

3.6 **Data plate**

A plate must be affixed in conformance with clause 8.5.3.1 of B44, containing data corresponding to items 49.1 to 3 of spec sheet, as verified by the tests.

3.7 **One test for more escalators**

If more than one identical escalator (makes, model, rise, capacity, etc.) is located in the same building, initially inspected simultaneously, and if the tests of the first escalator prove full conformance with the spec sheet data and B44 code, without any readjustments, in that case, no additional load tests will be required on other escalators in that building. However, setting of the torque in conformance with items 49.1 and 49.2 and test of the no-load stopping distance for conformance with item 49.3 shall still be required.