
APPENDIX I

MSK INTENSITY SCALE (AS RELATED TO BUILDINGS)

The following definitions are used in the scale:

(a) Type of structures (buildings)

Structure A

Buildings in field-stone, rural structures, unburnt brick houses, clay houses.

Structure B

Ordinary brick buildings, buildings of the large block and prefabricated type, half timbered structures, buildings in natural hewn stone.

Structure C

Reinforced buildings, well built wooden structures.

(b) Definition of quantity

Single, few About 5 percent

Many About 50 percent

Most About 75 percent

(c) Classification of damage to buildings

Grade 1 Slight damage

Fine cracks in plaster; fall of small pieces of plaster

Grade 2 Moderate damage

Small cracks in walls; fall of fairly large pieces of plaster, pantiles slip off; cracks in chimneys; parts of chimney fall down.

Grade 3 Heavy damage

Large and deep cracks in walls; fall of chimneys.

Grade 4 Destruction

Gaps in walls; parts of building may collapse; separate parts of the building lose their cohesion; and inner walls collapse.

Grade 5 Total damage

Total collapse of building.

(d) Intensity scale

I Not noticeable

II Scarcely noticeable (very slight)

III Weak, partially observed only

IV Largely observed

V Awakening

VI Frightening

Damage of Grade 1 is sustained in single buildings of Type B and in many of Type A. Damage

in few buildings of Type A is of Grade 2.

VII Damage of buildings

In many buildings of Type C damage of Grade 1 is caused; in many buildings of Type B damage is of Grade 2. Most buildings of Type A suffer damage of Grade 3, few of Grade 4. In single instances landslips of roadway on steep slopes; cracks in roads; seams of pipelines damaged; cracks in stone walls.

VIII Destruction of buildings

Most buildings of Type C suffer damage of Grade 2, and few of Grade 3. Most buildings of Type B suffer damage of Grade 3, and most buildings of Type A suffer damage of Grade 4. Many buildings of Type C suffer damage of Grade 4. Occasional breaking of pipe seams. Memorials and monuments move and twist. Tombstones overturn. Stone walls collapse.

IX General damage to buildings

Many buildings of Type C suffer damage of Grade 3, and a few of Grade 4. Many buildings of Type B show damage of Grade 4, and a few of Grade 5. Many buildings of Type A suffer

damage of Grade 5. Monuments and columns fall. Considerable damage to reservoirs; underground pipes partly broken. In individual cases railway lines are bent and roadway damaged.

X General destruction of buildings

Many buildings of Type C suffer damage of Grade 4, and a few of Grade 5. Many buildings of Type B show damage of Grade 5; most of type A have destruction of Grade 5; critical damage to dams and dykes and severe damage to bridges. Railway lines are bent slightly. Underground pipes are broken or bent. Road paving and asphalt show waves.

XI Destruction

Severe damage even to well built buildings, bridges, water dams and railway lines; highways become useless; underground pipes destroyed.

XII Landscape changes

Practically all structures above and below ground are greatly damaged or destroyed.

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