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REGULATION ON EQUIPMENT FOR PERSONAL EQUIPMENT FOR SAFETY AT  
WORK AND PERSONAL PROTECTIVE EQUIPMENT

(The Official Gazette of SFRY Nr. 35/69)

I. GENERAL PROVISIONS

Article 1

For the purpose of protecting the body and parts thereof of persons who are exposed to specific types of risks and hazardous impacts such persons are provided with means of personal protection (hereinafter: means) and personal protection equipment (hereinafter (equipment)), if the effects of risk and hazard cannot be removed by other measures of protection.

The scope of this Book of regulations refers to the works in which means and equipment are used, the conditions with respect to materials, dimensions and shapes to be fulfilled by such means and equipment, as well as specific forms of risk and hazard to which the persons are exposed during the performance of work.

Article 2

An enterprise sets out in its general documents, in line with Article 59 of the Framework Safety at Work Law, which work and which posts require means and equipment and sets out the means and equipment to be used, depending on the type and degree of risk or hazard, for protection against permanent risks and hazards, and which are used to remedy the effects of sudden (intermittent) or short-term risks and hazards.

II. MEANS AND EQUIPMENT

Article 3

Materials used to produce means and equipment or parts thereof shall not have an unpleasant odor, cause skin irritation and shall be color fast.

The means and equipment used in the workplace where there is a fire risk shall be made of non-combustible materials and fire-retardant materials.

The means and equipment used in the workplace where there is risk of mechanical, electrical, heat or similar impact, shall be resistant to tear, impact or break and to electricity or heat conductivity.

Apart from conditions set out in paragraphs 1 to 3 of this Article, the material used for means and equipment shall be resistant to corrosion, change of temperature and disinfectants.

Article 4

Materials used to make the means and equipment shall be considered to be color fast if after being held in general detergent solution for one hour, heated to 40°C (+/- 1°C) retains, after drying, its original color and the detergent solution remains uncolored.

testing subject to paragraph 1 of this Article does not apply to parts of means and equipment (filters etc) which must not come in contact with fluids.

#### Article 5

Resistance of materials used to make the means and equipment (leather, rubber, textile, artificial mass) to fire, is determined according to Yugoslav standards or accepted international standards applicable to the specific means or equipment. If there is no standard prescribed for a specific means or equipment the applicable standards shall be the standards for that type of material.

#### Article 6

Metal parts of means and equipment shall be considered sufficiently resistant to corrosion if, after 15 minutes of being held in boiling 15% salt solution, followed by 15 minutes in cold 10% salt solution, as well as after drying at 20°C (+/- 1°C) for 24 hours, viewed by the naked eye under a string light, they do not exhibit any sign of damage by corrosion.

#### Article 7

Resistance of the materials to high and low temperatures is determined according to Yugoslav standards or accepted international standards applicable to the specific means or equipment. If there is no standard prescribed for a specific means or equipment the applicable standards shall be the standards for that type of material.

#### Article 8

Means and equipment shall be considered sufficiently resistant to disinfectants if, after 10 minutes of being held in one part of 10% formaldehyde solution and nine parts of water at 20°C (+/- 1°C), after being taken out of the solution viewed by the naked eye, they do not exhibit any sign of damage or deformity.

Testing resistance pursuant to paragraph 1 of this Article does not apply to such part thereof which are not allowed to come in contact with fluids.

#### Article 9

Resistance of the materials to mechanical impact (tear, impact, break) is determined according to Yugoslav standards or accepted international standards applicable to the specific means or equipment. If there is no standard prescribed for a specific means or equipment the applicable standards shall be the standards for that type of material.

## 2. Means and equipment used for head protection

#### Article 10

In order to protect the head against the fall of objects or impact during the performance of work in mining, construction, metallurgy, stone quarries, in forest exploitation, oil rigs, during blasting, fire extinguishing, construction or repair of navigation vessels, during raising, lowering or moving or repair of steel structures and plant, during loading and unloading operations; for the purpose of protection of the head against hitting the follor or other surfaces in underground premises etc., and for the purspoe of protecting the head

against electricity shock . persons engaged in the performance of such work are provided with protective helmets (mining helmet, fire-fighting helmet, construction helmet, etc.).

#### Article 11

The protective helmet shall provide the full covering of the upper and posterior part of the head and shall have parts for protection of the forehead and the neck. The helmet shall have a comfortable cradle, adjustable to the head size, and on both sides shall have tightening stripes under the neck enabling the helmet to fit firmly on the head, provided that the distance of the interior of the helmet from the top of the head is at least 25 mm. Protective helmets used underground shall be fitted with lamp bearer and, if necessary, cable bearer.

The protective helmet shall be made of materials resistant to fire, impact and influence of water, acids and heat.

The protective helmet used in workplaces in which there is a risk of electrical shock shall be made of materials fulfilling conditions set out in paragraph 2 of this Article and shall not be electricity conductive.

The protective helmet, apart from conditions set out in paragraph 1 to 3 of this Article, shall also meet technical requirements according to valid Yugoslav standards.

#### Article 12

In order to protect the head against sunstroke while working outdoors (farming and irrigation works, fishing, etc.) persons performing such work are provided with straw hats or hats made of other materials, scarves or similar means or equipment to cover the head, if such works do not present the risk of objects falling on ones head.

#### Article 13

Hats used as protection against sunstroke shall be made in the usual sizes and in shapes that provide for full protection of the whole head and shall be comfortable to wear.

Materials that hats are made of shall be of low heat conductivity (such as straw), of light color (to retract light) and light to wear.

If the materials used to make the hat does not enable ventilation, the hats shall have ventilation holes and rim large enough to protect the forehead and the neck.

#### Article 14

In order to protect the head against dust and to protect the hair from being sucked into machines while working close to rotating machines or parts (automatic facilities etc) persons performing such work are provided with caps, dense nets, scarves or similar means or equipment to cover the head.

Equipment from paragraph 1 of this Article shall be light and comfortable to wear and shall sustain intermittent washing.

### 3. Means and equipment used for eyes and face protection

#### Article 15

In order to protect the eyes during manual work (sanding, plastering, painting, sieving materials, etc) in which there is risk of damage caused by fine particles flowing at lower speed in the direction of the face – persons performing such work are provided with goggles.

Goggles consist of standard frame and see-through glass or other transparent material.

Transparent glass or other material used for this purpose shall be 2.5 to 3.5 mm thick and moderately concave. Instead of transparent glass, if necessary, sight correction glass may be fit in the goggles, with the relevant prescription by the specialist MD.

#### Article 16

In order to protect the eyes during mechanical work (boring, sanding, metal, wood and other material processing etc) involving risk of damage caused by fine particles flowing at higher speed in the direction of the face straight ahead or sideways – persons performing such work are provided with protective goggles.

Goggles consist of frame with sideway protection and see-through glass or other transparent material.

With respect to the shape, thickness and type of glass used, the provisions of paragraph 1 of Article 15 hereof shall apply.

#### Article 17

In order to protect the eyes during manual or mechanical work (blacksmith work, nailing and breaking stone, working with cutters, cleaning welded parts, sanding, boring, metal, wood and other material processing etc) involving risk of damage caused by bigger particles and sparks flowing at higher speed in the direction of the face straight ahead or sideways – persons performing such work are provided with protective goggles with sideways protection.

Goggles consist from paragraph 1 of this article shall consist of two oculars connected by an adjustable bridge depending on eyes distance or by a firm bridge, triplex glass or special annealed glass and elastic tape. Oculars and the frame shall be easily adjustable for easy insertion of transparent glass or dark glass, if necessary. The oculars and the frame shall have ventilation openings with diameter not exceeding 1 mm. The total area covered with ventilation openings on one ocular shall not be less than 200 mm<sup>2</sup>. Parts of protective goggles resting on the nose and the face shall be lined with soft material.

#### Article 18

In order to protect the eyes against bright light, flying sparks or lower heat and UV radiation, and flying particles during the work performed with gas or electric-resistance

welding and electric welding requiring shading exceeding level 6 according to the prevailing Yugoslav standard JUS Z.B1.030 – persons performing such work are provided with protective goggles with glass, which may be of folding type.

With respect to the structure (oculars, sideways protection, tapes) provisions of paragraph 2, Article 17 shall apply.

The exterior surface of such protective goggles shall be smooth and concave. The frames, oculars and elastic tape of protective goggles shall be so made to enable comfortable and easy wearing of the goggles during the full working hours.

#### Article 19

In order to protect the eyes against simultaneous effects of light and heat during works relevant to melting or annealing of metals and other materials, or during hard metals welding, light metals welding, galvanization and similar works, and against the effects of strong UV radiation during works relevant to gas welding, cutting metals with fire, electric welding with equipment over 30 A– persons performing such work are provided with protective goggles with cobalt glass of level 1 to 6 according to Yugoslav standards JUS Z.B1.030. Cobalt glass may be combined with standard glass.

Protective goggles from the preceding paragraph may, if necessary, have also sideways protection. The exterior surface of such protective goggles shall be smooth and concave. The frames, oculars and elastic tape of protective goggles shall be so made to enable comfortable and easy wearing of the goggles during the full working hours.

#### Article 20

In order to protect the eyes against materials irritating to the eyes or materials with harmful effects on the eyes (ammonia, formaldehyde, etc.) in solid, fluid or gas state or in form of aerosol – persons exposed to such materials during work are provided with protective goggles. These goggles consist of impermeable frame and transparent triplex glasses, and, if necessary, also dark glass and cobalt glass. Instead of transparent glass, sight correction glass may be fit in the goggles, with the relevant prescription by the specialist MD.

#### Article 21

Transparent glass or other transparent material fitted in the frames of protective goggles from article 15, 16 and 17 shall be free of scratches, air bubbles other similar visible defects limiting their optical value.

Dark glasses and cobalt glasses from article 18 and 19, apart from fulfilling requirements of this article, shall also fulfill technical requirements relevant to permeability of light (shading degree) and heat and UV radiation, according to Yugoslav standards.

#### Article 22

In order to protect the eyes against flying particles of processed materials during works involving breaking and processing of stone (marbles, lime, granite, etc) during construction works using chisel and peak, during coarse processing of metals by

mechanical means and during similar works involving the risk of damage by bigger flying particles – persons performing such work are provided with protective goggles with wire nets.

Goggles of wired nets consist of oculars made of one or two pieces of wire material and elastic tape which is easily adjustable.

The sharp edges of protective goggles from paragraph 1 shall be lined with soft leather or textile. oculars shall cover eye dips, fit well on the face and shall be moderately concave.

All part of wire net protective goggles shall be made so as to enable easy and comfortable wear during full working hours.

#### Article 23

In order to protect the eyes, head and neck against direct or indirect effect of visible, UV or heat radiation and flying sparks of melted metals during arch welding - persons performing such work are provided with protective goggles with welder shields.

Welder shield may be manually held or head mounted.

Manually held shield consists of leather attachment, or is without it, the frame with dark or transparent glass and belt for wearing on the head.

Shields from paragraphs 3 and 4 of this Article shall be made of materials with low heat and electric conductivity, resistant to heat and moisture, fire retardant and resistant to disinfectants.

The dark or transparent protective glass and other parts of the welder shields shall comply with technical requirements set out in Yugoslav standards.

#### Article 24

In order to protect the eyes and the face against bigger floating particles of processed materials or against drops of corrosive materials that may get into the eyes or damage the face - persons exposed to such risk are provided with eye and face shields.

The eye and face shield may be foldable or not foldable.

Foldable shield consists of the head holder carrying a movable semi-circular support carrying a semi-circular plate. The adjustable frame fitted to the size of the head may, for stability during wearing, be strengthened with an arch going over the top of the head.

Unfoldable shield consists of semi-circular carrying support to which a transparent plate is fitted, folded towards the carrying support and of elastic tape holding the shield to the head.

The head frame and the semi-circular carrier from paragraphs 3 and 4 of this article shall be lined on the interior side with segments of soft material not irritating to the skin and of fast colors.

The transparent plate of the shield may be made either of plastic or of wire fabric. The plastic plate shall be fire retardant. The wire fabric plate shall have about 100 openings per 1 cm<sup>2</sup> and be of color that does not retract light.

The transparent plate of the shield shall not prevent more than 10% of the visible light.

#### Article 25

In order to protect the eyes against bigger floating particles of processed materials accompanied also by drops of corrosive materials that may get into the eyes from any direction - persons exposed to effects of such particles and drops or dust are provided with eye protecting shields.

The eye shield consists of frame covering the eye sockets from above, a transparent plate and an elastic tape holding the shield to the head.

The shape and the size of the eye shield shall be such to provide for full closing of eye sockets from all sides, at the same time enabling the person to wear eye sight corrective glasses.

The frame and the transparent plate of the shield can be made of the same plastic colored or colorless material. This material shall be fire retardant, fast color and nnot irritant to the skin. Metal parts shall be non corrosive.

The eye shield and any part thereof shall comply with relevant conditions of Yugoslac standards.

#### 4. Means and equipment for hearing protection

#### Article 26

In order to provide protection of hearing against excessive noise at the workplace where it is not possible by technical means to reduce the noise below the prevailing allowed limits - persons who are during their work exposed to noise are provided by adequate means or equipment, depending on the intensity of noise, as follows:

- 1) cotton-wool for protection against noise up to the level of up to 75 dB (decibel)
- 2) ear tips for protection against noise up to the level of up to 85 dB (decibel)
- 3) ear shield for protection against noise up to the level of up to 105 dB (decibel)

The ear tip from paragraph 1, item 2 of this article shall not reduce hearing by more than 15 dB, while the ear shield from paragraph 1, item 3 of this article shall not reduce hearing by more than 25 dB.

The means and equipment from paragraph 1 of this article must not be irritable to the ear (the ear canal, the ear lobe) and must provide reduction of noise under prescribed limits.

## 5. Means and equipment for protection of respiratory organs

### Article 27

In order to provide protection of respiratory tract at the workplace involving dangerous gases and other aerosols (smoke, fog, dust) in concentrations exceeding maximum allowable limits prescribed by the prevailing Yugoslav standards - persons who are during their work exposed to such environment are provided by adequate means or equipment for protection of the respiratory organs, as follows:

- 1) respirator for the protection of respiratory organs against coarse, non-aggressive and non-toxic dust,
- 2) respirator for the protection of respiratory organs against fine industrial dust not containing silicium-dioxide ( $\text{SiO}_2$ ),
- 3) respirator for the protection of respiratory organs against fine industrial dust, smoke and fog, containing free silicium-dioxide or radioactive particles,
- 4) respirator for the protection of respiratory organs against fine industrial dust or harmful steam in lower concentrations,
- 5) pipe mask for the protection of respiratory organs against harmful gases, steam, fog, smoke or dust in high concentrations, or for the protection of respiratory organs in working environments with less than 16% oxygen. The pipe mask from paragraph 1 of this item may be used with blower or may be connected to piping with compressed air, accompanied with reduction valve to reduce air pressure under the mask,
- 6) pipe mask with hood or helmet for protection of respiratory organs, head and neck, while working in an environment with high concentrations of harmful gases, fog, smoke and dust. The pipe mask with helmet is used if there is risk of mechanical head or neck injury. The pipe mask from paragraph 1 of this item may be used with blower or may be connected to piping with compressed air, accompanied with reduction valve to reduce air pressure under the mask,
- 7) gas mask for protection of respiratory organs against harmful gases, steam, fog or dust, to be used in working environments in which oxygen concentration may not exceed 16% and for which it is known that concentration of aerosols in the working environment does not exceed the limits at which the leachete from the masks is tested, as prescribed by applicable Yugoslav standards. If the use of mask from paragraph 1 generates heat (for instance in case of leachete of carbon-monoxide) the air temperature must not, during 1 hour of mask use – exceed  $50^\circ\text{C}$  provided that the working environment does not contain more than 1% of carbon-monoxide,
- 8) oxygen and compressed air devices (insulation devices) for the protection of respiratory organs in working environments involving or potentially involving high concentrations of harmful gases, steam, or smoke or with oxygen content below 16% (in pit mines with mine fire, in closed premises with nitric gases, in reservoirs with liquid of gaseous hydrocarbons, etc.)

### Article 28

The means and equipment listed in Article 27 must not obstruct normal breathing and must be made so as to enable quick and easy use. These means and equipment must also fulfill technical requirements prescribed by relevant Yugoslav standards.

## 6. Means and equipment for protection of hands

### Article 29

In order to protect hands against different risks or harmful effects, different protective gloves are provided, depending on the type of work performed:

- 1) standard leather gloves – for the protection of hands against mechanical injuries (cuts, scratches, burns, etc) during work performed by metal workers, sanding workers, blacksmiths, miners, transport workers, machine and elevator operators, sailors etc, if there is risk of such injuries. Such gloves may be a combination with textile,
- 2) leather gloves with metal reinforcement or plates – for the protection of hands under severe work where standard gloves from item 1 of this article would not provide sufficient protection,
- 3) lined leather gloves . for the protection of hands against low temperatures in cold storage and freezers, and at construction sites when temperatures are below 5°C,
- 4) gloves made of fire resistant materials (asbestos etc) . for the protection of hands against high temperatures during melting of metals, glass and other melting materials, casting, foundry work in steel and other metal processing, and while working with high furnaces, dome and other industrial furnaces, etc
- 5) gloves for welders and flame metal cutters – for the protection of hands against melted metal, heat and UV radiation, and against burns caused by contact of welder of metal cutter with the hot material,
- 6) gloves made of natural or synthetic rubber – for the protection of hands against moisture, corrosive materials, low poison concentrations, infections materials, ethers, alcohols, and similar harmful materials,
- 7) gloves made of plastic resistant to solvents – for the protection of hands against aliphatic aromatic and chlorinated hydrocarbons, alcohols, ethers, esters, organic acids, herbal oils, etc. Such protective gloves must not be used for protection against electric shock,
- 8) rubber gloves for electricians – for secondary protection against electricity while working in electrical facilities with voltage exceeding 650 V towards the earth. In terms of protection against high voltage from paragraph 1 of this item other measures of protection are used also (power cut-off, insulation tools, grounding, etc)
- 9) protective fingers made of leather, rubber or plastic materials – for the protection of fingers against mechanical injury, lower effects of strong corrosive materials and solvents. These protective fingers may be made stronger by steel finger tops for the protection of hands against mechanical injury caused by the fall of heavy objects,
- 10) shield for the palm and the hand – for protection against mechanical injury and burns.

## 7. Means and equipment for protection of legs

### Article 30

In order to protect the knees during molding and metal casting, and during terrazzo, asphalt, parquet, cobble road construction and similar work performed in the squatting position on dry surface – persons performing such work are provided with leather knee protectors.

#### Article 31

In order to protect the legs against the fall of heavy objects or tools, against sparks of annealing or melted metal, against injury by axe in forestry or against similar mechanical injuries – persons performing such work are provided with leather or hard textile shin protector, lined with fine fabric.

The shin protector from paragraph 1 of this article used to protect the legs against sparks of melted metals by welders, metal cutters, shall be made of fire resistant materials (leather, asbestos, etc) or shall be lined with such material.

Shin protector used during their work by forestry and transport workers, carpenters, miners, sawing plants, must be strengthened by elastic steel tapes.

#### Article 32

In order to protect the feet against specific risks persons are provided with protective shoes, depending on the kind of work:

- 1) rubber shoes for electricians (shoes, galoshes, boots, etc) for protection against electricity
- 2) shoes with shoe soles made of heat insulating materials (wood etc) for protection of feet while walking on heated or cold surfaces on which other types of shoes may not be used
- 3) leather shoes for welders and metal cutters for protection of the feet against heat or floating sparks during welding and metal cutting,
- 4) leather or rubber shoes or boots with steel caps or hard rubber caps with installed steel foot support for protection against mechanical injuries of feet (against the fall of heavy objects, breaking through the sole by sharp objects, nails, etc) and for protection against water and moisture
- 5) leather shoes (galoshes, boots, etc) for protection of the feet during work in chemical plants and electrolytic metal processing, where rubber or synthetic shoes do not provide sufficient protection.

#### Article 33

Protective shoes from article 32 hereof must, when necessary, have installed special components to protect the ankle.

In order to protect the toes, protective caps are installed in protective shoes, when necessary, made of steel sheet, hard rubber or other shock resistant materials.

#### Article 34

The means and equipment from articles 30 to 33 must not cause blistering or perspiration during work or other inconveniences during falls or movement.

The means and equipment from paragraph 1 herein shall also comply with other relevant Yugoslav standards.

#### 8. Means and equipment for the protection of wrist, shoulder and spine

##### Article 35

In order to provide protection against injury while handling objects with sharp edges (metal sheets, glass, tools, etc) and against vibration transferred from hand held mechanized tools (pneumatic hammer etc) to the hands, and in order to provide stability for wrists while performing hard transport work – wrist protectors are provided.

##### Article 36

In order to protect shoulders while carrying on the shoulder objects exceeding 15 kilograms and while carrying objects with sharp edges, or very cold or heated objects – shoulder shields are provided.

##### Article 37

In order to protect the spine against deformities of conditions caused by constant carrying of heavy objects on the shoulder or the back – transport and other workers are provided with breast protectors.

The protector from paragraph 1 herein, and the protective means from article 36, must not cause blistering during use.

#### 9. Means and equipment for the protection of stomach organs

##### Article 38

In order to protect stomach organs against mechanical injuries while working with wood processing machines with manual feed, or during manual or mechanical metal processing (hand blacksmithing, cutting, air hammer processing) workers are provided with protective leather belts or specially reinforced leather aprons.

In order to provide protection against moisture and cold while working in a seated position on cold floors or in humid earth, workers are provided with protective carpets made of leather or other insulating materials.

#### 10. means and equipment for protection of the body

##### Article 39

If, during the performance of his work, the body of a worker is exposed to harmful effects of technological processes (dirt, dust, moisture, high temperature) different protective clothing is provided such as:

1) textile overalls (of cotton fabric etc) or two piece suit for work on machines and for works during which the worker is exposed to dirt or dust, like during installation and dismantling of facilities (industrial, traffic, construction, agricultural plant, machines,

facilities and parts thereof), while cleaning and washing, degreasing, lubricating or painting with degreasing agents, lubricants or surface paints of machines and facilities (oil derivatives, paint, etc) and during milling, crushing, classifying mineral and other materials generating fine dust, and also during underground mining and chimney cleaning,

2) clothes made of impregnated impermeable fabric (non-rubber) for utility services (in the sewerage, waste collection, cleaning and street washing, etc) and for work in wet pits, during navigation, fishing, etc

3) clothes made of strong rubber fabric for work with corrosive poisons and infectious materials and in water

4) clothes made of asbestos or aluminium foil for work in industrial furnaces and in metal casting and cutting, fire fighting, etc

5) clothes made of materials not conducting heat or UV radiation for welders and flame metal cutters

#### Article 40

Protective clothing from article 39 of this Book of regulations, depending on the type of protection that it should provide, shall fulfill the following conditions:

1) the material (fabric, cotton, etc) used to make the clothes from article 39, para 1, must be made of fabric not allowing easy penetration of dust, paint, lubricants and other harmful materials to the skin of the worker and must maintain its quality during washing

2) protective clothing for work on machines with rotating or moving parts must be tight against the body of the worker. The sleeves and legs should be close to the body by use of straps with buttons or other means

3) protective clothing made of water impermeable material must not be permeable to water

4) protective clothing made of strong rubber material must be made of such material which remains intact after being exposed to direct effect of strong and corrosive materials (acids, bases, etc) for 8 hours. Seams on such clothing must be dense and such that corrosive materials can not penetrate through them,

5) protective clothing of asbestos or aluminium foil for protection against spraying dissolved matter must be made of fire resistant material, which remains intact after 30 minutes exposure to the solution

6) protective clothing for underground work must be made stronger at shoulders, elbows, knees and the buttocks. The strengthened part must stretch from beginning of sleeves to over the neck and cover the whole shoulder. the middle of the strengthened part on the elbow shall reach the top of the elbow. The strengthened part of the knee shall reach at least 8 mm below and above the knee. The strengthened part on the buttocks shall reach the waist and in normal sitting position shall cover the whole buttocks;

7) protective chimney sweeping clothes shall, in terms of the quality of fabric and its shape be fit for outdoor work (rains, snow, wind) and at the same time provide protection for the body of the worker against dirt, soot, gases and smoke.

#### Article 41

Id, during the work, the body of the worker is exposed to harmful effects of high temperatures, melted metals, moisture or radiation – the workers will be provided with protective aprons, as follows:

- 1) protective apron made of leather, asbestos or similar material – for protection of welders and metal cutters, blacksmiths and workers removing ash from steam boilers and other workers against sparks of melted metal or pieces of annealed metal, against burns in case of direct contact with hot materials, against UV radiation and heat and physical injuries,
- 2) protective apron made of leather or similar materials with metal plates and dots – for protection against mechanical injuries during rough work under conditions in which the apron from item 1 does not provide sufficient protection;
- 3) protective asbestos apron – for protection of radiation by high temperatures in metallurgical and other furnaces (in smelting plants, foundaries, etc)
- 4) protective aprons of rubber fabric – for protection against moisture and corrosive materials, solvents, etc.

#### 11. Means and equipment for protection against ionizing radiation

##### Article 42

If during work the body of the worker is continually or periodically exposed to sources of ionizing radiation (radio-isotopes, industrial x-ray devices etc) – persons working with such sources shall be provided with protective means and equipment against ionizing radiation as follows:

- 1) protective aprons for protection of respiratory organs made of lead rubber
- 2) respirator with leachete for protection of respiratory organs against radioactive and ionizing dust

#### 12. Means and equipment for protection against unfavorable weather conditions

##### Article 43

If during outdoor work workers are exposed to unfavorable weather conditions (rain, snow, low temperatures, etc) as well as indoor workers exposed to low temperatures, draught or similar health impacts (in cold storage, freezers, etc) – such persons shall be provided with protective means and equipment against unfavorable weather conditions as follows:

- 1) protective raincoats made of rubber or impermeable material, open in front – for protection during work outdoors (in agriculture, construction, traffic, etc)
- 2) protective raincoats made of rubber or impermeable material, of standard cut – for protection against rain and wind (guards, postmen, transport workers, etc)
- 3) rain hood or impermeable hat made of rubber or impermeable material – for protection of the head against wind and rain (sailors, fishermen)
- 4) rain hood made of impermeable material – for protection of the head, eyes, neck and shoulders against dust, dirt, heat and mechanical injuries (transport workers, chimney sweepers, etc)

- 5) furcoats or warm coats – for protection against cold in the winter while working outdoors or in rooms without heating or open rooms, for instance in tractor, truck, dredger cabins (guards, drivers of cargo vehicles, railway workers, engine drivers in steam engines, etc). Furcoats may be short or long, depending on type of work;
- 6) lined clothes - for protection against cold in the winter while working outdoors or in rooms without heating (cold storage, freezers, unheated cabins of cranes, dredgers, tractors, trucks, etc)
- 7) ear protectors – for protection against low temperatures while working outdoors;
- 8) lined gloves, lined shoes or felt boots accompanied by other protective means for workers outdoors, depending on the degree of cold and the type of work.

The means and equipment from paragraph 1 hereof must, in terms of materials and work provide full protection against harmful effects of weather conditions.

### 13. Means and equipment for protection against falling from high elevations

#### Article 44

In order to provide protection against falling from high elevations from places that, due to the nature of work, cannot be fenced or otherwise protected against falling, or while working on buildings under construction of structures over rivers and lakes, on piles in power plants or telephone networks under construction, in quarries, over precipices, in cisterns, silos, etc – persons working in such places shall be provided with protective belts provided with tying ropes and additional ropes, if necessary.

The materials used for the protective belt, its dimensions and the make shall be such to take into account the static and dynamic load as prescribed by relevant Yugoslav standards.

### 14. Means and equipment for protection against drowning in water

#### Article 45

In order to provide protection against drowning while working over water or in water (while mounting bridges, geodetic surveying, hydrological or other measurements, transmission lines over rivers, etc) – persons performing such work shall be provided with protective belts.

The materials used for the protective belt shall be rubber reinforced fabric, rubber, plastic or metal boxes and must securely hold the person above water.

### 15. Maintenance of means and equipment for protection

#### Article 46

Companies which in their activities use means and equipment for protection shall regularly maintain them in good condition.

Damaged, torn means or equipment that cannot be repaired must be discarded or destroyed.

Article 47

Means and equipment placed directly on the head (helmet, hood, etc) ears (antiphone, etc) the mouth (masks) or nose shall be disinfected and washed after every use, if used by several persons.

Article 48

Means and equipment made of textile or leather, such as protective clothing and shoes, used for outdoor work, work with radioactive or infectious materials, shall regularly be disinfected and washed or decontaminated, depending on the type of material and the effects to which the worker is exposed during work.

### III. TRANSITORY AND CLOSING PROVISIONS

Article 49

Companies and other beneficiaries of protective means from article 2 herein must harmonize such means and equipment with provisions of this Book of regulations within one year of this Book of regulations coming into effect.

Article 50

On the date when this Book of Regulations comes into effect, the provisions from articles 88 to 95 of the General Book of Regulations concerning hygienic and technical conditions for protective measures at work shall cease to apply (The Official Gazette SFRY Nr. 16/47 and 36/50).

Article 51

This Book of Regulations shall come into effect as of the date when it is published in the "Official Gazette of the Republic of SFRY".