# VOLUME 3

# TECHNICAL SPECIFICATIONS

**KESHAN MUNICIPALITY**

**ADVENTURE PARK EQUIPMENTS TECHNICAL SPECIFICATIONS**

**RUBBER TILE GENERAL TECHNICAL SPECIFICATIONS**

40x40x2-2,5-3-4 cm Rubber Tile

For 200mm rubber tile HIC test results should be 2,16m. Regarding chemical analyse results, rubber granuls which are in calibre 1,00-3,00 and after sifted are mixed with single component cement which is gained by recycling %100 and which is based of polyurethan will be mixed with colour pigments into moulds; these moulds are subjected to heat treatment and pressure for a given period.

In production of moulded rubbers, single component binder which is based polyuretan shouldn't be less than %6. For gaining Red colour in rubber tiles, iron oxide pigments should be used; for Green, chromium oxide pigments should be used.

The average weight of 1 m2 rubber tile is 18-20 kg.

Joint gap should be 3 mm during application.

Manufacturer company should have conformity certificate for EN 1177.

**APPLICATION**

After cleansing the concrete area from any kind of dirt, oil, humidity, at least 1 kg double-component rubber binder should be used for 1 m2.

Casting Rubber Technical Specifications

Floor Coating Synthetic EPDM Surface

Synthetic floor coating material should be applicable to the concrete and permeable to water. Casting rubber's thickness should be 20 mm.

Application:

Concrete floor should be cleansed from any dirt, dust and moisture. Then, with help of rolls, the primer (polyurethane binder, ethyl acetate mix) will be applied to the ground to cement the material and the floor. After primer drying, as the first step of the application, 13mm SBR granule layer is poured. First of all, SBR rubber granules which are calibred 1-3 mm will be mixed in ratio of %18 with polyurethane binder. Min. 20 kg granules should be used to gain 13 mm thickness. After that, like pouring asphalt, both heating and compressing, it is casted to the floor by finisher. Black SBR granüle layer which is in thickness of 8mm will be dried within 10-15 hours. During this drying period, area mustn't be entered. After this process, EPDM granules which are calibred 1-3 mm will be mixed in ratio of %20 with polyurethane binder. It will casted by finisher in thickness of 7 mm on the black layer with colours. Min. 5 kg granules should be used to gain 7 mm thickness. In the field that finisher can't be used, it will be crafted.

**GAME GROUP-1 TECHNICAL SPECIFICATIONS**

Long Straight Tunnelled Slide H:260 cm S Tunnelled Slide H:260 cm Double Straight Slide H:120 cm Wavy Slide H:120 cm Straight Slide H:120 cm Spiral Slide H:260 cm Grille Bridge Split Bridge Tunnel Pass Conical Roof Figured Hexagonal Roof Polyethylene Climbing Stairs 6 steps Moving ring Pass Arc Rope-Climbing Polyethylene Climbing Panel 4 m Rope-Climbing Rope Bridge Doubled Slide Panel Single Slide Panel Spiral Slide Panel Tunnelled Slide Panel Window Panel Castle Narrow Panel Castle Lower Panel Square Platform Spiral Slide Platform Hexagonal Platform Polyethylene Panel

**LOAD-BEARING CONSTRUCTION**

• Poles of minimum size 90x90mm. and minimum length 2400mm., by ensuring that it

includes fewer defects such as wood knots shall undergo lamination so as to increase the mechanical strength of the system and shall be in a bedded structure in order to minimise the length of the wood.

To prevent from humidity and impurity, polyethylene stoppers which are shaped semispherical with injection method and are immobilized with at at least 2 aluminum rivets will close the top of these pipes. 2 sanded pipes (size of 114mm horizontally and vertically) will be quartered and will be connected by main polyemid fasteners which are made with injection method or with aluminum casting. Bases of pipes sanded that form the load-bearing construction will be the size of 150x150x5mm and they will be connected with seaming method an with plate flange. If the area of installation has a rough floor, carrier pipes will be immobilised from the wholes (minimum 10mm) with the pins (minimum 8x75mm) to the ground. If the area is soil, anchorage system that forms with plate flange welded in size of minimum 150x150x5mm and 4 galvanized bolts in size of minimum M10x30 onto sanded pipe which is 200mm in height: 114mm in diameter and 2,5mm in wall thickness and plate flange will be used.

Carrier load-bearing construction pipes shall be one-piece. No marks of adding pipe, welding and stitching will be seen. Platforms, railings or clips will not be welded directly. But for being able to assemble plate platforms and plastic covered platforms, in suitable elevation, flanges can be welded properly to the forms of platform's edges and wholes, in size of minimum 5mm.

FASTENERS

Carrier platform and railing clips will be produced from polyemid-based materials which are made with the method injection and aluminum casting. Chord fasteners used in order to quarter the load-bearing construction in size of 114mm will be produced polyemid-based materials that are formed with th injerction method and aluminum casting. One side of this chord fastener will be immobilized to the pipe with minimum M10x25 galvanized bolts. And the other side will be attached from the back to the pipe with 2 semispherical nuts in diameter 114mm and bolts that are galvanized with polyemid-based clips that are produced with the method injection and aluminum casting. Raises of all bolts and nuts shall be maximum 3mm. Carrier platform and railing clips shall wrap in a shape of circle the pipes 114mm that form the load-bearing construction. The raise of clips from pipes shall be max. 16mm to protect the health of children. Raises of all bolts and nuts shall be maximum 3mm. Colouring shall adapt to the codes of food for health of children.

**TRIANGULAR PLATFORM**

In case it is used, the minimum edge length of the triangular platform shall be 1150mm and each edge will be of the same length.

DKP with 2mm hole will be produced from plate by being bended as one piece. A minimum of 7 open-cross sectioned pieces of support will be welded to the platform to prevent stretching. The minimum area of the Triangular Platform shall be 0.55 m2 Corners of the platform will be surrounded by quarter-circled pipes of 114mm in diameter. All holes shall be drilled on the platform itself. Holes should not be drilled and thus the platform not damaged during installation. The platforms,consisting of zinc, sulfur, chromium, lead, carbon etc.. will be entirely covered by less than 1% of the plastic composite. The material is Dip coated at a temperature of 300 C but prior to Dip Coating, the material is specially coated at each point by applying a suitable plastic bonding adhesive of a minimum thickness 1 The name of the administrator shall be apertured as desired onto the required platform before coating.

The hexagonal platform will be constructed either by merging two half hexagon which its sides shall be minimum length 1150mm or merging the edges of one piece hexagon to the load-bearing construction. Hexagonal platform will be produced from plate by being bended as one piece with DKP with 2mm hole A minimum of 7 open-cross sectioned pieces of support will be welded to the platform to prevent stretching. Hexagonal Platforms will occupy a total minimum area of 3.2m2. Corners of platforms will be surrounded by quarter-circled pipes of 114mm in diameter All holes shall be drilled on the platform itself. Holes should not be drilled and thus the platform not damaged during installation. The platforms, consisting of zinc, sulfur, chromium, lead, carbon etc.. will be entirely covered by less than 1% of the plastic composite. The material is Dip Coated at a temperature of 300C but prior to Dip Coating, the material is specially coated at each point by applying a suitable plastic bonding adhesive of a minimum thickness 1 mm. But before adhesive undercoating, oil found on the surface of the metal sheet shall be removed by applying a surface cleaner. The name of the administrator shall be apertured as desired onto the required platform before coating.

On platforms in height 1,60m and 2,60m where spiral slide will be installed, to provide 100cm safe free fall distance, the main platform will be formed by being produced of perforated (minimum 2mm) sheet metal in size as one piece in size of 1824mm x 1150mm. The triangular side of the platform which shall be 1150x1150x1150mm in size will start like a equilateral triangle and progressively it will become narrow to the size of 730x886mm until merging with slide. A minimum 20x40x1,5mm of boxed profile paint and besides on the corners minimum 4 open-sectionned support will be welded to the platform to prevent stretching. The total area of spiral platforms will be 1.95 m2 Corners of platforms will be 114m in diameter and be in shape of half circle bending the pipe. All holes shall be drilled on the platform itself. Holes should not be drilled and thus the platform not damaged during installation. The platforms,consisting of zinc, sulfur, chromium, lead, carbon etc.. will be entirely covered by less than 1% of the plastic composite. The material is Dip Coated at a temperature of 300C but prior to Dip Coating, the material is specially coated at each point by applying a suitable plastic bonding adhesive of a minimum thickness 1 mm. But before adhesive undercoating, oil found on the surface of the metal sheet shall be removed by applying a surface cleaner. The name of the administrator shall be apertured as desired onto the required platform before coating.

**POLYETHYLENE CLIMBING INCLINE**

The logo of double-coloured 15mm HDPE will be processed properly with Router machine to its shape and drawing. Polyethylene panel (HDPE), will be immobilized to the carrier component properly with the parts of connection which are connected from corners to the load-bearing construction. Links between main body and polyethylene panel will be done with galvanized bolts. Body will be formed by Q89 and Q60 pipes. Polyethylene panel will be double-coloured after being passed some required process so that it could be written, used for advertising and processed on it logos. Polyethylene panel's thickness will be minimum 15 mm.

**STAIRS**

• The steps shall be as follows: of depth 225mm, with height 150mm to a maximum of

200mm and at least of width 610mm and shall be of perforated steel, 2mm thick.

• The sides of the steps will be of 2mm sheet of metal, with protusions at the edges to enter

2mm-thick slots, thus further stengthening the system. The side railings of the stair will be joined together at these points and then welded. Futhermore, the stair railing with be secured even further by means of nuts and bolts. Stairs from ground to platform and platform to platform will be a minimum of 800mm. and a maximum of 1200mm. and the steps will be manufactured in groups of 4 or 6 such that they can easily be accessed.

The minimum height of the step of the stairs will be 110mm.

• The edges of the stair's banister will be produced from pipes of minimum dimension

27x2mm. and the bars from pipes of minimum dimension 27x2mm. The main carrier shall be from flat Iron rod, of minimum dimension 30x5mm. This railing system will silmultaneously serve as the first entrance and as a side entrance to the main carrier pipe; it will return to the main pipe in a twisting manner. The Stair banister and all the associated materials are joined together by welding and are then sandblasted as a whole. Afterwards, they are inserted in oven to be coated with an electrostatic polyester powdered paint Length of empty spaces in between banister bars of stairs of platforms should comply with the TS EN 1176-1 general safety standard, they should not exceed a maximum of 89mm. The set up of the stairs onto the platform shall be performed by fitting and tightening 2 mm. galvanized steel bolts and nuts into the available holes. The stairs, consisting of zinc, sulfur, chromium, lead, carbon etc.. will be entirely covered by less than 1% of the plastic composite. The material is Dip coated at a temperatahenefeci

but prior to Dip Coating, the material is specially coated at each point by applying a suitable plastic bonding adhesive of a minimum thickness 1 mm.

**VERTICAL STAIRS**

.Minimum of 800mm from ground to platform and a maximum of 2000mm from platform

to platform such that it can easy be accessed. Vertical ladder of 27mm, width 2mm, wall thickness of 21mm welded to pipes of thickness 2mm..The minimum interval between the two steps will be 110mm. Set up of the vertical ladder to the platform shall be accomplished by securing the galvanised round-headed bolts in a reverse manner. To curb corrosion and damage by nature, the whole equipment will be Sandblasted and then placed in electrostatic powdered painting oven to be painted. Connection of the vertical ladder to the ground shall be performed by dowelling or anchoring. Manufacturing will occur as in the general safety standard TS EN 1176-1, i.e, head-neckhand-foot-hair, etc...

**GENERAL PROPERTIES OF THE PLASTIC TO BE USED IN THE GAME GROUPS**

• Polyethylene being used shall be produced of raw material that is propre for low density

(LLDPE) rotation with the rotation method.

Polyethylene colouring agents, either as raw material or in powdered form, will not be used. The so-called Masterbatch granules shall be used. As it is difficult to uniformly distribute a powdered material into plastic, the powdered material is first taken at high concentration into 3 screw extruders inside the high viscous plastic, turning them into granules. Later, before processing, Masterbatch is roughly mixed in a specific ratio with Raw Polyethylene. In the rotating process of the carrier, the powdered material is distributed evenly throughout the main palstic. In parallel to a uniform distribution, a rate

of 6 per thousand of "UV" radiation will be applied to the colouring. This will hamper the colour from fading and will help maintain the authenticity for a longer period. Paint used for colouring shall not pose any threat to children's health and shall equally satisfy the food regulaions standard. To prevent from electrification, with the system of rotation, anti-static materials will be attached to the raw material during the production.

**TUNNELLED BRIDGE PASS**

Minimum length of the tunnelled bridge will be minimum 2000mm. To hamper corrosion due to water, moisture and effects of nature, the safety handles will be sandblasted before being passed to the oven for powdered electrostatic painting. Tunnelled bridge will be formed by bringing the polyethylene steps which are produced with the method rotation and weighing, on a frame that is formed with minimum 30x70x2mm profile. Number of these 5 kg steps will minimum 7. And there will be arc roofs on the top of roof, weighing 3 kg produced with the rotation method and covering the top of bridge. Minimum 6 arc roofs will be used in roof section. To provide passing safely to the sides of tunnelled bridge, there will be railing formed with pipes 32x2mm in wall thickness. Spaces between roof section formed by arc polyethylene parts with step produced from polyethylene, will be covered with railings minimum 2mm in wall thickness. Tunnelled bridge will be connected to the platform by means of braces 40x40 mm and via galvanized bolts. To curb corrosion and damage by nature, the whole equipment will be sandblasted and then placed in electrostatic powdered painting oven to be painted. Manufacturing will occur as in the general safety standard TS EN 1176-1.

**TUNNELLED RAMP PASS**

• Minimum length of the tunnelled ramp pass will be 1200mm.

To curb corrosion and damage by nature, the whole equipment will be sandblasted and then placed in electrostatic powdered painting oven to be painted. Tunnelled ramp will be formed by bringing the polyethylene steps which are produced with the method rotation and weighing, on a frame that is formed with minimum 30x70x2mm profile. Number of these 5 kg steps will minimum 7. And there will be arc roofs on the top of roof, weighing 3 kg produced with the rotation method and covering the top of bridge. Minimum 6 are roofs will be used in roof section.

To provide passing safely to the sides of tunnelled bridge, there will be railing formed with pipes 32x2mm in wall thickness. Spaces between roof section formed by arc polyethylene parts with step produced from polyethylene, will be covered with railings minimum 2mm in wall thickness. Tunnelled bridge will be connected to the platform by means of braces 40x40 mm and via galvanized bolts. The whole equipment will be sandblasted and then placed in electrostatic powdered painting oven to be painted against external factors.

Manufacturing will occur as in the general safety standard TS EN 1176-1.

• Polyethylene being used shall be produced of raw material that is propre for low density

(LLDPE) rotation with the rotation method. Polyethylene colouring agents, either as raw material or in powdered form, will not be used. The so-called Masterbatch granules shall be used. As it is difficult to uniformly distribute a powdered material into plastic, the powdered material is first taken at high concentration into 3 screw extruders inside the high viscous plastic, turning them into granules. Later, before processing, Masterbatch is roughly mixed in a specific ratio with Raw Polyethylene. In the rotating process of the carrier, the powdered material is distributed evenly throughout the main palstic. In parallel to a uniform distribution, a rate of 6 per thousand of "UV" radiation will be applied to the colouring. This will hamper the colour from fading and will help maintain the authenticity for a longer period. Paint used for colouring shall not pose any threat to children's health and shall equally satisfy the food regulaions standard. To prevent from electrification, with the system of rotation, anti-static materials will be attached to the raw material during the production.

**SPLIT BRIDGE**

Minimum length of a split bridge shall be 1200mm.

• To curb corrosion and damage by nature, the whole equipment will be sandblasted and

then placed in electrostatic powdered painting oven to be painted. There will be a polyethylene split pass railing at least 1,3kg weighing produced by puffing method and also there will be 2 bridge side railings on each side of the ground formed by a profile in size of 40x80x2mm. 20 split polyethylene pieces will be used provided that 10 number of it on each two sides of the split bridge pass.

Polyethylene material in shape of split used to provide a safe pass to the sides of split bridge, will be connected to each other via pipe profiles minimum 32x2mm in wall thickness. split bridge platform will be connected to the platform by means of braces 40x40 mm and via galvanized bolts. The whole metal equipment will be sandblasted and then placed in electrostatic powdered painting oven to be painted against external factors. Manufacturing will occur as in the general safety standard TS EN 1176-1.

**POLYETHYLENE GRILLE PANEL RAILINGS**

Polyethylene grille panel railings helps children to stand safely on arc bridges, straight bridges and ramps. Polyethylene grille panel railings shall be minimum 1,90 m2 Polyethylene grille panel railings will be immobilized to the main construction via clip system with the pipes 2mm in wall thickness, 27mm in diameter from the top; and from the ground below will be immobilized via being linked with the bolts to the platform. Devices shaped like ring and that the pipes 27mm in diameter can fit into will be used on connection spots between the pipes and panels. Manufacturing will occur as in the general safety standard TS EN 1176-1 Polyethylene grille railing panel's minimum weight will be 11 kg.

**PROFILE RAILINGS**

Railings formed by pipes 21mm in diameter and 2mm in wall thickness equally installed between 2 pipes 27mm in diameter and 2mm in wall thickness, will be welded to each other. The whole metal equipment will be sandblasted and then placed in electrostatic powdered painting oven to be painted against external factors. Profile railings will be bonded to the main construction to the top with 2 clips 114mm in diameter and with the galvanized bolts bent as contra, and to the ground by narrowing galvanized bolts.

• The minimum height of the profile railing shalle be 400mm; the space between comma

pipes adn construction and to themselves shall be maximum 89mm.

**BALUSTRADE OF THE SPIRAL SLIDE (h:260cm.)**

.Spiral slide railing will be produced by metal in order to provide safe passing. Zinc plated bolts shall be used to tighten and secure the railings of the spiral slide onto the platform. To ensure the protection of children the surface design protrusions of the animations on the surface of the railing of the polyethylene spiral slide shall not be pointed, jabbed and sharp. The shapes, forms and openings of the polyethylene tiktak boards shall satisfy the general safety standard TS EN 1176-1. The minimum weight of the Spiral Balustrade Slide (h:260 cm) shall be 35kg.

**POLYETHYLENE FIGURED PANEL BALUSTRADES/RAILINGS**

The polyethylene figured panel balustrades used shall enable children to stop on the platform securely. The polyethylene-made figured panels produced for that the game has objective of extending children's imagination and has flower view. The polyethylene railings shall be fixed to the main structure with pipes of diameter 27mm. and thickness 2mm through the clamp system from the top and by means of bolts from the bottom. These pipes will be passed as a whole through the polyethylene railings Polyethylene figured panels will max. 0,90 m2 Rings of diameter 27mm,produced through Injection Molding, will be used to connect pipes to panels at the junctions. To ensure the protection of children the surface design protrusions of the animations on the surface of the polyethylene figured boards shall not be pointed, jabbed and sharp. The

shapes, forms and openings of the polyethylene figured boards shall satisfy the general safety standard TS EN 1176-1. Minimum Weight of the barrier polyethylene figured board will be 10 kg. There will be a bell glass on the center of the polyethylene figured board made from plexyglass or some material like it.

**POLYETHYLENE ACTIVITY PANEL**

The activity polyethylene panel used in the playgrounds shall serve as a safe stopover on the platform and is educative and instructive as well. The main structure of the activity panel shall be fixed to the 27mm diametered and 2mm-thick pipes from above using clamps and using bolts to fix it to the platform. These pipes will pass as a whole inside the polyethylene balustrade. The polyethylene balustrade's area shall be of a minimum of 0,90 m2. Ring-shaped apparatuses allowng the pipes to pass through and made via injection molding shall be used at the pipe-panels junctons. To ensure the protection of children the surface design protrusions of the animations on the surface of the polyethylene activity boards shall not be pointed, jabbed and sharp. The alphabet, numbers and figures on the polyethylene activity panel will certainly not be pasted. The alphabet, numbers and figures will be made in colour during manufacture. The shapes, forms and openings of the polyethylene activity boards shall satisfy the general safety standard TS EN 1176-1. The minimum weight of the polyethylene panel shall be 7 kg.

**SPIRAL SLIDES (h:26001100mm.)**

Platforms of maximum 2000 + 100mm. will be reduced in height to a maximum of 40 ° inclined, and at no point shall be designed to be 60°. It will be designed that in the center

there no other pipe will fit into but the pipes of minimum 76mm.

• To provide the safety of children on slides and there will be a plane of minimum 3

slow down to free fall. . The slip section of slide will be minimum 400mm wide and the side walls will be high

minimum 150mm high. Radius of the Slide-Out exits should be 50mm., as per the general safety standard TS EN

1176-1 / TS EN 1176-3 for slides. . The double-walled slide shall be produced from raw polyethylene of low density as a single

continuous piece via Rotational Molding. Slides will be installed to the platform with galvanized bolts. Not to ruin the view and to extend life for these bolts, it will be closed with plastic stoppers formed by injection method. The slide shall be even more firmly secured to the floor by welding it to 5mm steel flanges, Pipes of minimum length 400mm, diameter 27mm thickness 2.5mm used in Anchoring or Dowelling shall be used to fix the system to the ground. This anchor system will be mounted to the slide with galvanised bolts. After all processes are complete all metal parts

are sandblasted before being painted. For slides of height 2600mm and above, Spiral Polyethylene slides will be of a minimum weight 130kg. The slope of slide exits will be such that no water accumulation of water occurs, there shall not be an inverted gradient to prevent collection of water.

**16 Painted.**

**DOUBLE PLAIN SLIDE**

1000mm. / 1200-1500mm. platforms will be reduced in height to a maximum of 40 ° inclined, and at no point shall be designed to be 60 °. To provide input on safety of children and child, slides will have a length a minimum 350mm to slow down. Slides' slip section will be high of minimum 400mm and slides' side walls will be wide of minimum 150mm.

Radius of the output places of slides should be 50 mm according to the general safety rules EN 1176-1 / TS EN 1176-3. Slides shall be manufactured of double-walled and low-density polyethylene raw material as a single piece of technology to the rotation. The slide shall. be even more firmly secured to the floor by welding it to 5mm steel flanges, Pipes of minimum length 400mm, diameter 27mm,thickness 2.5mm used in Anchoring or Dowelling shall be used to fix the system to the ground. This anchor system will be mounted to the slide with galvanised bolts. After all processes are complete all metal parts are sandblasted before being painted. Double plain slides' minimum weight shall be 55 kg. The slope of slide exits will be such that no water accumulation of water occurs, there shall not be an inverted gradient to prevent collection of water.

**POLYETHYLENE DOUBLE PLAIN SLIDE MIRRORS**

Polyethylene slide mirrors helps children to pass safely from platform to the slide.

• Polyethylene slide mirrors will be immobilized to the main construction by linking via clip

system with the pipes 27mm in diameter 2mm in wall thickness.

• Devices shaped like ring and that the pipes 27mm in diameter can fit into will be used on

connection spots between the pipes and panels.

• Polyethylene double plain slide mirror's minimum weight shalle be 6,5 kg.

**FIGURED POLYETHYLENE ROOF**

- The figured roofs will be of a minimum of diameter 2900mm. and a minimum of 2200mm. in

height. There will be a minimum distance of 1000mm. in between the platform and the lower part of the roofs. It is essential that the figured roofs be directly connected to the main construction in one way or another. No connecting element shall be used in between them. . The roof edges, connecting parts and dome to be made will be of 3 main parts.

The figured roof will be of 2 colours. The connections and the roof borders will be of different colours. Minimum weight of the Polyethylene figured Roof shall be 95kg

**STRAIGHT SLIDES**

Minimum 1000mm. maximum 2000mm. platforms will be reduced in height to a maximum of 40 ° inclined, and at no point shall be designed to be 60 °. To provide input on safety of children and child, slides will have a length a minimum 350mm to slow down. Slides' slip section will be high of minimum 400mm and slides' side walls will be wide of

minimum 150mm.

• Radius of the output places of slides should be 50 mm according to the general safety rules

EN 1176-1/TS EN 1176-3. Slides shall be manufactured of double-walled and low-density polyethylene raw material as a single piece of technology to the rotation. Kaydıraklar galvanizli civatalarla platforma monte edilecektir. Bu civataların görüntüyü bozmaması ve daha uzun ömürlü kalması amacıyla enjeksiyon yöntemi ile şekillendirilmiş plastik tapalar ile kapatılacaktır. The slide shall be even more firmly secured to the floor by welding it to 5mm steel flanges, Pipes of minimum length 400mm, diameter 27mm, thickness 2.5mm used in Anchoring or Dowelling shall be used to fix the system to the ground. This anchor system will be mounted to the slide with galvanised bolts. After all processes are complete all metal parts are sandblasted before being painted. For slides of height 1000-1200mm and above, Spiral Polyethylene slides will be of a minimum weight 30kg. For slides of height 1500mm and above, Spiral Polyethylene slides will be of a minimum weight 40kg. For slides of height 2000mm and above, Spiral Polyethylene slides will be of a minimum weight 50kg. The slope of slide exits will be such that no water accumulation of water occurs, there shall not be an inverted gradient to prevent collection of water.

**90° SLIDES**

. Platform height will range from (1000-2000)mm. and will be such that exit is at an angle of

no more than 40° with respect to the horizontal. To no account will it approach an inclination angle of 60°. Slides will be of minimum length 350mm. This ensures the safe passage and proper slowdown of children down the plane. - The plane of the slide shall be 400mm in width, the side walls having a minimum height of

150mm. Radius of the Slide-Out exits should be 50mm., as per the general safety standard TS EN 1176-1 / TS EN 1176-3 for slides. . Double-walled slides will constitute of low-density polyethylene raw material, produced as a single piece through Rotation technology. Slide shall be mounted onto the platform through Galvanized bolts and closed with plastic stoppers, with aim of not disrupting the image of the bolts and extending the life-span of the shape given Flanges of minimum 5mm shall be inserted through welding. Pipes of minimum length 400mm, diameter 27mm,thickness 2.5mm used in Anchoring or Dowelling shall be used to fix the system to the ground. This anchor system will be mounted to the slide with galvanised bolts. After all processes are complete all metal parts are sandblasted and then painted. 90° Polyethylene slides' minimum weight will be 30kg. The slope of slide exits will be such that no water accumulation of water occurs, there shall not be an inverted gradient to prevent collection of water.

**POLYETHYLENE SINGLE SLIDE MIRROR**

Polyethylene slide mirrors helps children to pass safely from platform to the slide. Polyethylene slide mirrors will be immobilized to the main construction by linking via clip

system with the pipes 27mm in diameter 2mm in wall thickness.

• Devices shaped like ring and that the pipes 27mm in diameter can fit into will be used on connection spots between the pipes and panels.

Polyethylene single slide mirror's minimum weight shall be 8,5 kg.

**TUNNELLED SLIDES**

Platform height will range from (1000-1200-1500-2000-2600-3400-4500)mm. and will be such that exit is at an angle of no more than 40° with respect to the horizontal. To no account will it approach an inclination angle of 60°. The opening part of the tunnel entrance to-be-made shall be 750mm in diameter and cylindrical and at a reasonable angle of slide to the horizontal.The entrance tunnel is mounted to higher or lower middle tunnel components based on the height of the platform. The last part part shall be the exit one. An aperture of 500mm will be designed at this point such that while reaching the end phase in sliding the child's head will not hit the tunnel. Radius of the Slide-Out exits should be 50mm., as per the general safety standard TS EN 1176-1 / TS EN 1176-3 for slides. Double-walled slides will constitute of low-density polyethylene raw material, produced as a single piece through rotational molding technology. Slide shall be mounted onto the platform through Galvanized bolts and closed with plastic stoppers, with aim of not disrupting the image of the bolts and extending the life-span of the shape given. en more firmly secured to the floor by welding it to 5mm steel flanges, Pipes of minimum length 400mm, diameter 27mm,thickness 2.5mm used in Anchoring or Dowelling shall be used to fix the system to the ground. This anchor system will be mounted to the slide with galvanised bolts. After all processes are complete all metal parts

are sandblasted before being painted. The slope of slide exits will be such that no water accumulation of water occurs, there shall not be an inverted gradient to prevent collection of water.

ethylene panels will be used at the connection point in the tunnel slide platform in order to ensure safe passage. The bolts used in joining the multiples parts of the slide shall be coated with plastic by Injection Molding and shall be such that they extend the lifespan of the structure and do not disturb the look of the object. The weight of the following, varies depending on their height and shall be as follows: H:(100-120)cm slide - 57 kg, H: (150)cm slide - 71 kg, H: (200)cm slide - 85 kg, H: (260)cm slide - 130kg, H: (340)cm slide - 175 kg, H: (450)cm slide - 215 kg. The Tunnel slides can be manufactured in the many different ways as described above; i.e, straight, spiral, curvy, etc...

**POLYETHYLENE TUNNELLED PANELS**

Polyethylene tunnelled panels used in game groups will be connection strip minimum 30mm; on entry of tunnelled slides, on head of the passes shaped "T", and at beginnings and the ends of different tunnelled and tunnel passes. Polyethylene tunnelled panel will be immobilized to the main construction via clip system with the pipes 2mm in wall thickness, 27mm in diameter from the top; and from the ground will be immobilized via being linked with the bolts to the platform. All pipes can get

through it a one piece.

• Devices shaped like ring and into which a pipe 27mm in diameter can fit will be used on

connection spots between the pipes and panels

• Manufacturing will occur as in the general safety standard TS EN 1176-1, i.e, head-neck

hand-foot-hair, etc... - Polyethylene tunnelled panel's minimum weight shall be 6 kg.

**POLYETHYLENE CLIMBING**

- Polyethylene-made climb, of maximum height 12001100mm., on the surface of which are

designed indentations and relief protusions to assist in climbing. The climbing structure will be mounted onto the platform by means of 3 zinc plated bolts. These bolts shall be covered by plastic plugs designed by Injection Moulding that will help extend their life-spans and shall be such that they will not damage the shape of the incline. Minimum weight of the climb shall be 22kg.

**CLIMBING INCLINE WITH CHARACTERS**

Polyethylene-made-climbing, of maximum height 1200+100mm. , on the surface of which are designed indentations and relief protusions to assist in climbing. The rock-climbing structure will be mounted onto the platform by means of 3 zinc plated bolts. These bolts shall be covered by plastic plugs designed by Injection Moulding that will help extend their life-spans and shall be such that they will not damage the shape of the incline. Minimum weight of the rock-climbing shall be 26kg.

**CASTLE WALL STRAIGHT AND-CURVED PANEL**

- For safety and illustrative purposes, the existing railing panels of the polyethylene fortress

or the upper parts of the passage and entrances shall be shaped into a fortress-like structure. The polyethylene-made fortress panels produced for the game has objective of boosting children's imagination and project a better image of a fortress. Polyethylene castle wall railings shall be minimum 0,35 m2 The polyethylene railings shall be fixed to the main structure with pipes of diameter 27mm. and thickness 2mm through the clamp system from the top and by means of bolts from the bottom. These pipes will be passed as a whole through the polyethylene railings. Rings of diameter 27mm,produced through injection Molding, will be used to connect pipes to panels at the junctions. To ensure the protection of children the surface design protrusions of the animations on the surface of the railing of the polyethylene square polyethylene fortress shall not be pointed, jabbed and sharp. The shapes, forms and openings of the boards of the square polyethylene fortress shall satisfy the general safety standard TS EN 1176-1. The Minimum Weight of the curved castle Fort will be 6 kg.

**POLYETHYLENE WINDOW PANEL BALUSTRADES/RAILINGS**

The polyethylene window balustrades used shall enable children to stop on the platform securely,

Polyethylene balustrades shall be minimum 0,90 m2

Polyethylene grille panel railings will be immobilized to the main construction via clip system with the pipes 2mm in wall thickness, 27mm in diameter from the top; and from the ground below will be immobilized via being linked with the bolts to the platform. Devices shaped like ring and that the pipes 27mm in diameter can fit into will be used on connection spots between the pipes and panels. To ensure the protection of children the surface design protrusions of the animations on the surface of the polyethylene daisy boards shall not be pointed, jabbed and sharp. The shapes, forms and openings of the polyethylene panels shall satisfy the general safety standard TS EN 1176-1. Minimum weight shall be 11 kg.

**POLYETHYLENE LOWER PANELS**

. The polyethylene balustrades used shall enable children to stop on the platform securely

and to sit on the sitting place. Minimum weight of the polyethylene railings 11 kg.

Minimum weight of the polyethylene railings is 25 kg. . The polyethylene-made panels produced for the game has objective of extending children's

imagination and project a better image of a forest. The polyethylene railings shall be fixed to the main structure with pipes of diameter 27mm. and thickness 2mm through the clamp system from the top and by means of bolts from the bottom. These pipes will be passed as a whole through the polyethylene railings. Rings of diameter 27mm,produced through Injection Molding, will be used to connect pipes to panels at the junctions. To ensure the protection of children the surface design protrusions of the animations on the surface of the polyethylene boards window shall not be pointed, jabbed and sharp. The shapes, forms and openings of the polyethylene window boards shall satisfy the general safety standard TS EN 1176-1.

• Polyethylene being used shall be produced of raw material that is propre for low density

(LLDPE) rotation with the rotation method. Polyethylene colouring agents, either as raw material or in powdered form, will not be used. The so-called Masterbatch granules shall be used. As it is difficult to uniformly distribute a powdered material into plastic, the powdered material is first taken at high concentration into 3 screw extruders inside the high viscous plastic, turning them into granules. Later, before processing, Masterbatch is roughly mixed in a specific ratio with Raw Polyethylene. In the rotating process of the carrier, the powdered material is

distributed evenly throughout the main palstic. In parallel to a uniform distribution, a rate of 6 per thousand of "UV" radiation will be applied to the colouring. This will hamper the colour from fading and will help maintain the authenticity for a longer period. Paint used for colouring shall not pose any threat to children's health and shall equally satisfy the food regulaions standard. To prevent from electrification, with the system of rotation, anti-static materials will be attached to the raw material during the production.

**ROOF-TOP MODELS OF THE POLYETHYLENE CARRIER**

Visual animations made of polyethylene shall be placed onto the carrier with aim of enhancing its appeal. The visual animations will be placed at a height of at least 1000mm. This prevents users from injuries by possibly getting striked by these animations. To ensure the protection of children the surface design protrusions of the animations shall not be pointed. jabbed and sharp. The way (openings, forms) these animations are made satisfies the general safety standard TS EN 1176-1. There will be a minimum number of animations as follows: minimum one sail of 3kg, minimum one sun of 5kg; minimum one monkey of 5kg, minimum one bird of 1kg,

minimum one palm of 10kg. . Polyethylene being used shall be produced of raw material that is propre for low density

(LLDPE) rotation with the rotation method. Polyethylene colouring agents, either as raw material or in powdered form, will not be used. The so-called Masterbatch granules shall be used. As it is difficult to uniformly distribute a powdered material into plastic, the powdered material is first taken at high concentration into 3 screw extruders inside the high viscous plastic, turning them into granules. Later, before processing, Masterbatch is roughly mixed in a specific ratio with Raw Polyethylene. In the rotating process of the carrier, the powdered distributed evenly throughout the main palstic. In parallel to a uniform distribution, a rate of 6 per thousand of "UV" radiation will be applied to the colouring. This will hamper the colour from fading and will help maintain the authenticity for a longer period. Paint used for colouring shall not pose any threat to children's health and shall equally satisfy the food regulaions standard.

To prevent from electrification, with the system of rotation, anti-static materials will be attached to the raw material during the production.

**MANILLA ROPE CLIMBING UNITS**

• It will be produced by merging steel manilla ropes covered with polypropylene (26mm in

diameter) in a correlation between two pipes which are minimum 114mm in diameter and 2,5mm in wall thickness and their height shall be minimum 2200mm, and again between 2 pipes which are 48mm in diameter and 2,5mm in wall thickness and are bent circular. Interocular distance between manilla ropes will be maximum 20x20cm. In center of the manilla rope there will be a rope made of polypropylene like fiber. Breaking load of the rope shall be 4400 kg. It should be ultraviolent stabilized. Weight of a manilla rope (16mm) shalle be minimum 260g. To hamper corrosion due to water, moisture and effects of nature, the safety handles will

be sandblasted before being passed to the oven for powdered electrostatic painting. . During all process of production the general safety standard TS EN 1176-1 shall be applied.

**MOVING RING**

The main structure will consist of a sandblasted pipe of diameter 114mm, thickness 2.5mm and will be 2500mm-long. Attached to the main pipe will be 6 pieces of 25mm-diametered, 2mm-thick and 200mm

long at least, bent into a triangle.

• The system will be sandblasted before being painted electrostatically by a polyestered

powder such that it does not corrode through water, moisture and nature. Manufacturing will occur as in the general safety standard TS EN 1176-1, i.e, head-neckhand-foot-hair, etc... All pipe profiles (114mm in diameter, minimum 2,5mm in wall thickness and 25mm in diameter and 2mm in wall thickness) will be used properly to the standarts of TS EN 102192, TS-6476, DIN 2394.

**SPECIFICATION FOR ROPE-CLIMBING (4m-long) TO BE FASTENED TO THE GAME GROUP**

**A1. BEARING POST:**

• Pipe to be used on bearing post shall be minimum 140mm in diameter and 4mm in wall

thickness.

There will be one bearing load.

• Height between top of the bearing post and the ground organized of the game area shall

be minimum 4000mm.

A square sheet metal plaque (400x400mm in size and 10mm in wall thickness) will be welded to the base of bearing load for connection to the ground. Plaque will be perforated 8 times Ø 20mm in diameter for anchorage connection. 6 triangular sheet metal flag (100x60mm in size and minimum 5mm in wall thickness) will be welded to the connection spot of the pipe and ground.

**A2. TOOL FOR IMMOBILIZATION OF ROPE:**

• This tool will be formed with a cover and a main body.

There will 2 tools. This tool will be made of moulding alloyed aluminum. On the main body, there will channels for ropes to get through.

Main body will be designed that it will enter the carrier bearing load, minimum 90mm.

• There shall be 4 jags Ø 10mm to be able to attach a cover to the main body.

There will be 4 holes Ø 12mm on the cover and the head of these holes shall be Ø 19 mm. to prevent bolts to overflow

**A4.TURNBUCKLE:**

• Turnbuckle units will be used for the connection between 4 sides of rope system to concrete hook. Body of the turnbuckle will be made of favoured steel ST44, Mapa and Y-Branch 1040 & ST 52-3. Turnbuckle will have capacity of minimum 2 tone experiment test load and capacity of minimum 3 tone safe working load.

**B1. ROPE Ø 15 MM. IN DIAMETER:**

Braid ropes' diameter shall be Ø 16 mm.

Surface of 6 galvanized steel wires Ø 0.7 mm in diameter, will be covered with polypropylene rope. In center of the manilla rope there will be a rope made of polypropylene like fiber. Weight of rope 16mm shall be minimum 260g/m. Breaking load of the rope shall be 4400 kg. It should be ultraviolent stabilized. There will be no toxic substance in it or in paint. Weight of steel rope to be used in system shall be minimum 48kg.

**B2. METAL LINKS:**

. All rope link spots that will form the Pyramid Rope will be produced by pressing aluminum link parts. . It will be immobilized via aluminum link points which have screw socket.

• While merging Double Robe, press aluminum link piece will be used.

**C1. FASTENERS:**

. All fasteners such as bolts, nuts, stamps used in system will be inox.

**C2. SECURITY :**

. Game group parts should be designed in a manner of avoiding spaces, holes, squeeze.

**C3 .PAINT AND GALVANAZATION :**

All metal used in construction of system will be galvanized at least 12 micron galvanization covering with electro-galvanisation system. All metal pieces that aren't inox will be painted with the not-plumbeous electrostatic powder paint.

**C4. MONTAGE :**

Class of the concrete to be used for montage of the system to the gorund, will be in standarts at least C20, and wire mesh outfit will be added inside the concrete.

**SAFETY HANDLES**

Safety handrail -to ensure safety and security of children- to be used in elements such as rock-climbing devices and systems or flat slides, arc and chain ladders and inclines can be added separately, if needs to be. The varying twisting shape of a 27x2mm. pipe will be secured by clamps of diameter 114mm and will be fixed to the carrier through galvanised nuts and bolts, secured in reverse manner. To hamper corrosion due to water, moisture and effects of nature, the safety handles will be sandblasted before being passed to the oven for powdered electrostatic painting.

ANCHORAGE A pipe of diameter 114mm and height 250mm will be fixed to the lower surface of the sheet of metal through welding. A joint pipe of minimum length 100mm will be welded to this pipe such that the concrete around the pipe stays firm. While mounting the system, the anchor shall be balanced and fitted into concrete through the use of specific templates in an excavated pit of up to 300x300mm. and 350mm in depth. The 5mm and 150x150mm. welded and electrostatically powder-painted anchor at lower part of the vertical structure of the carrier, shall be secured tightening M10 nuts to anchor bolts. The anchor system will be encastrated into concrete; because of water and moisture, this anchor apparatus is double-painted by an anti-rust paint to prevent oxidisation.

**SANDBLASTING AND ELECTROSTATIC POWDERED OVEN PAINTING**

- For better adhesion of paint and better tensile strength on the welded surfaces, the metals

parts are sandblasted after being worked upon. To eliminate rust, dirt and oil which may be found on the material surface, that may hamper painting, Sandblasting - the most effective method - is used. This purifies the material and opens its pores, for better paint adhesion, thus preparing the material for painting. The metals are inserted into a pressure-resistant chamber filled with tiny little metal balls and are sprayed onto by pressurised air to remove dirt, oil and rust and to open the pores of the material for better paint adhesion.

**GAME GROUP-2 TECHNICAL SPECIFICATIONS**

**Specifiations of Materials Used**

**Metal:**

All metal components will be respectively subjected to sandblasting and electrostatic powder coating. Load-bearing construction will constructed with steel pipes circular cross-section which is in diameter of min. 114 mm, in wall thickness of 2,5 mm. Interconnection pipes' diameter is 89 mm or 60 mm, wall thickness is 3 mm.

**Rope:** Diameter of stranded wire rope will be Ø 16 mm. 6 galvanized iron wires which are in diameter of Ø 0.7 mm will be coated with polypropylene rope. These ropes will be connected squarely in interocular distance of max. 20x20 cm. In the centre of rope, there will be polypropylene rope in shape of fiber. The weight of the rope 16 mm will be min. 260 g./m. The breaking load of the rope should be min 4400 kg.

**Plastic:**

The plastic used will be low density polyethylene (LLDPE). It will be subjected to milling process and will be UV protector, durable against bad weather conditions. The transition parts will be manufactured from LLDPE as double-walled with the method of rotation and its weight will be min. 6 kg.

Plastic (HDPE): The plastic used will be double coloured high density polyethylene (HDPE). It will be subjected to milling process and will be UV protector, durable against bad weather conditions. The thickness og the panels will be 15 mm and it will be two coloured.

Stepped rock climbing will be produced of polyethylene as double-walled. Its

weight will be min.25 kg.

Seat panels will be polyethylene. It will be produced by injection method. Its weight will be min. 11 kg.

Height of slide will be min. 1000 mm, max.

1200 mm. Its weight is min. 20 kg. Sliding part is in width of 400 mm, side walls are in height of min. 150mm.

Main pipes diameter will be 114 mm, thickness of 2,5 mm and in length of min. 2500 mm. Pipes

in shape of triangle will in diameter of 25 mm and in thickness of 2 mm.

Safety Handlings will be used for Simple Slides, Chain Stairs, Climbings (pipe) and Rock Climbings. Bending pipes in size of 27x2 mm. in different shapes, it will be constructed with clips in diameter of 114 mm.

Footings will be produced of polyethylene by injection method. Metal section is formed with

bended pipes in size of 48\*2 mm. Interconnection pipes' diameter is 89 mm or 60 mm, wall thickness is 3 mm.

Footing parts will be polyethylene. There will be wholes on pontoons in which pipes in diameter of 32mm will pass and the upper pipe's size will be 89\*3mm.

Pipe in the center will be in size of 2000x32mm, wall thickness of 2mm. Its connection to the main construction from the top will be in height of 1100 mm, in size of 27\*2mm.

Load-bearing platform and railings clips will be produced of aluminum casting or materials based polyamid which is produced by injection method. All nuts and bolts' lugs will be max. 3 mm.

**Anchorage:**

4 bolts (M10x30) will be welded to the square metal sheets whose size is 150x150 mm. and wall thickness is 5 mm. The anchor shall be balanced and fitted into concrete through the use of specific templates in an excavated pit of up to 300x300mm. and 350mm in depth. The 5mm and 150x150mm. welded and electrostatically powderpainted anchor at lower part of the vertical structure of the carrier, shall be secured by tightening M10 nuts to anchor bolts. The anchor system will be encastrated into concrete; because of water and moisture, this anchor apparatus is double-painted by an anti-rust paint to

prevent oxidisation.

**GAME GROUP-5 FITNESS SERIES SPECIFICATIONS**

**Specifiations of Materials Used**

**Metal:**

All metal components will be respectively subjected to sandblasting and electrostatic powder coating. Load-bearing construction will constructed with steel pipes circular cross-section which is in diameter of min. 114 mm, in wall thickness of 2,5 mm. Interconnection pipes' diameter is 89 mm or

60 mm, wall thickness is 3 mm.

Rope: Diameter of stranded wire rope will be Ø 16 mm. 6 galvanized iron wires which are in diameter of Ø 0.7 mm will be coated with polypropylene rope. These ropes will be connected squarely in interocular distance of max. 20x20 cm. In the centre of rope, there will be polypropylene rope in shape of fiber. The weight of the rope 16 mm will be min. 260 g./m. The breaking load of the rope should be min 4400 kg.

**Plastic:**

The plastic used will be low density polyethylene (LLDPE). It will be subjected to milling process and will be UV protector, durable against bad weather conditions. The transition parts will be manufactured from LLDPE as double-walled with the method of rotation and its weight will be min. 6 kg.

Plastic (HDPE): The plastic used will be double coloured high density polyethylene (HDPE). It will be subjected to milling process and will be UV protector, durable against bad weather conditions. The thickness og the panels will be 15 mm and it will be two coloured.

Stepped rock climbing will be produced of polyethylene as double-walled. Its

weight will be min.25 kg.

Seat panels will be polyethylene. It will be produced by injection method. Its weight will be min. 11 kg.

Height of slide will be min. 1000 mm, max.

1200 mm. Its weight is min. 20 kg. Sliding part is in width of 400 mm, side walls are in height of min. 150mm.

Main pipes diameter will be 114 mm, thickness of 2,5 mm and in length of min. 2500 mm. Pipes

in shape of triangle will in diameter of 25 mm and in thickness of 2 mm.

Safety Handlings will be used for Simple Slides, Chain Stairs, Climbings (pipe) and Rock Climbings. Bending pipes in size of 27x2 mm. in different shapes, it will be constructed with clips in diameter of 114 mm.

Footings will be produced of polyethylene by injection method. Metal section is formed with

bended pipes in size of 48\*2 mm. Interconnection pipes' diameter is 89 mm or 60 mm, wall thickness is 3 mm.

Footing parts will be polyethylene. There will be wholes on pontoons in which pipes in diameter of 32mm will pass and the upper pipe's size will be 89\*3mm.

Pipe in the center will be in size of 2000x32mm, wall thickness of 2mm. Its connection to the main construction from the top will be in height of 1100 mm, in size of 27\*2mm.

Load-bearing platform and railings clips will be produced of aluminum casting or materials based polyamid which is produced by injection method. All nuts and bolts' lugs will be max. 3 mm.

**Anchorage:**

4 bolts (M10x30) will be welded to the square metal sheets whose size is 150x150 mm. and wall thickness is 5 mm. The anchor shall be balanced and fitted into concrete through the use of specific templates in an excavated pit of up to 300x300mm. and 350mm in depth. The 5mm and 150x150mm. welded and electrostatically powderpainted anchor at lower part of the vertical structure of the carrier, shall be secured by tightening M10 nuts to anchor bolts. The anchor system will be encastrated into concrete; because of water and moisture, this anchor apparatus is double-painted by an anti-rust paint to

prevent oxidisation.

**GAME GROUP-3 SPECIFICATIONS**

**Specifiations of Materials Used**

**Wood:**

The wood to be used will be first class imported Sapelli. Woods will be manufactured with max. () 20 mm tolerence. All wooden parts will be impregnated and if it is requested, will be painted with a paint which doesn't include any material damaging the human health. In every 1 meter wood, there can be 4 knurls. There will be no rotten or partially welded knurls. All parts of the wood which are visible will be grinded.

**Metal:**

All metal components which are in quality of 304 will be respectively subjected to sandblasting and electrostatic powder coating. Load bearing masts' diameter which are used as handling or footing will be 5 mm and they will be cut by laser The tubes used as handlings or footing will be Ø32 mm and wall thickness will be 2,5 mm. Flanges will be constructed with 5 mm thick stainless steel plates. As a supporter, there will be stainless tubular profile which is Ø32mm will be used under the sapelli woods.

**Fasteners:**

All bolts, screws and nuts will be galvanized. All plugs will be plastic.

Anchorage: 4 bolts (M10x30) will be welded to the square metal sheets whose size is 150x150 mm. and wall thickness is 5 mm. The anchor shall be balanced and fitted into concrete through the use of specific templates in an excavated pit of up to 300x300mm. and 350mm in depth. The 5mm and 150x150mm. welded and electrostatically powder-painted anchor at lower part of the vertical structure of the carrier, shall be secured by tightening M10 nuts to anchor bolts. The anchor system will be encastrated into concrete; because of water and moisture, this anchor apparatus is double-painted by an anti-rust paint to prevent oxidisation.

**GAME GROUP-4 TECHNICAL SPECIFICATIONS**

**Specifiations of Materials Used**

P**lastic:**

Animal figures and railings will be made of polyethylene by rotation and blowing method. They will be subjected to milling process and will be UV protector, durable against bad weather conditions. The size of railings will be 85x12

**Metal**:

All metal components will be respectively subjected to sandblasting and electrostatic powder coating. Load bearing masts will be Ø114 mm and in thickness of 2,5 mm.

The horizontal load bearing masts will be Ø89 mm. Platform of the ramp will be constructed with DKP metal sheet plate which is 2 mm. Railings of the ramp will be constructed with the pipes Ø27x2mm and Ø21x2mm.

**Rail Mechanism:**

Diameter of steel tube which is connected to the sligind mechanism will be Ø 32 mm x 2 mm. The component used for seating or standing will be rubber. There will be 12 different disks will provide the movement.

**Fasteners:**

All bolts, screws and nuts will be galvanized. All plugs will be plastic.