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摩卡细部设计丛书

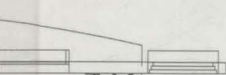


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CEILING DESIGN MANUAL

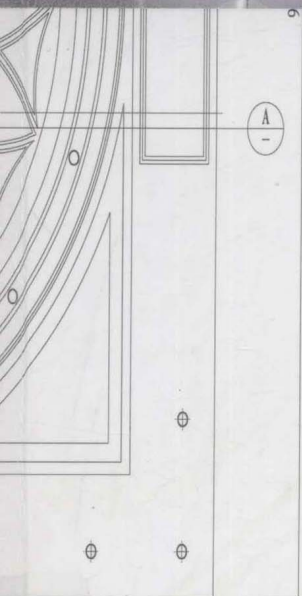
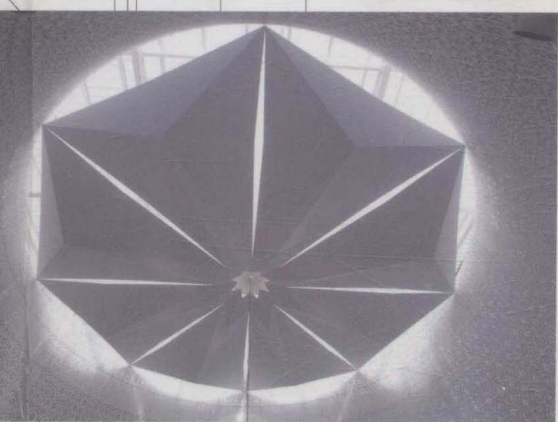
天花吊顶设计手册

香港理工国际出版社 编



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U-PARK

The design of the suspended ceiling is also called ceiling design, which needs to decorate the bare ceiling with elegant and poised materials and lighting. The suspended ceiling can't be touched and used like floor and wall, but it plays an important role in decorative effects. As people's vision often has many contacts with the ceiling, the shape and the materials quality of suspended ceiling have a direct influence on the effect of the space.

吊顶设计也称天花设计。吊顶设计,就是用些雍容华贵的材质和灯饰把光秃秃的天花板“包”起来。吊顶不像地面和墙面那样能被人接触和使用,但吊顶在装饰效果中却起着非常重要的作用。人们的视觉与它接触的时间较多,因此吊顶的形状和所用材料的质地直接影响着空间的效果。



FOREWORD

前言

At present, there are several main materials of ceiling in the market, including mineral wool board, thistle board, plank (artificial board), glass, metal, PVC pinch plate, etc. The patterns of ceiling design are more and more various with the diversification of the style of interior design, including plane pattern, concave-convex pattern, suspension pattern, tic-tac-toe pattern, glass pattern, etc. They all have their own traits.

This manual sets out from the material, form, pattern, style, choosing more than 1,000 unique ceiling designs, which cover all of the most popular examples in the market, and each of them can make a different decorative effect, and bring people a new feast for the eyes.

目前,市场上主要的吊顶材料有矿棉板、纸面石膏板、木板(人造板)、玻璃、金属、PVC扣板等几种。随着室内设计风格的多样化,吊顶的设计花样也越来越多:平面式、凹凸式、悬吊式、井格式、玻璃式等,各有千秋。

本手册从天花吊顶的材质、形式、类型、风格出发,选取了独具特色的天花吊顶1000多例,涵盖了市面上最出彩的天花吊顶案例,每一例都能创造出不同的装饰效果,给人们带来全新的视觉感受。

INFORMATION OF CEILING

Forms of Ceiling

There are several main forms of ceiling, including flat ceiling, grilling ceiling, partial ceiling, special-shaped ceiling, caisson ceiling, etc.

Flat Ceiling

The flat ceiling often uses materials including PVC pinch plate, aluminium pinch plate, gypsum board, mineral wool sound-absorption board, glass fibre board, glass, etc., and lights lie in or on the top plane.

Grilling Ceiling

The usual method of the grilling ceiling is to use wood to make a framework at first, and then inset the transmitting or frosted glass; the lights are above the glass. It's also a kind of flat ceiling, but its mould is more lively, and has better decorative effects. The advantage is that light in the room is soft, easy and natural.

Partial Ceiling

The partial ceiling is designed in the condition that there are water, heating and gas pipelines, and the room is not high enough for the whole ceiling. The best pattern of this form is that the water, heating and gas pipelines are near the side wall, and the finished effect is similar to the special-shaped ceiling.

Special-shaped Ceiling

The special-shaped ceiling is a kind of partial ceiling, and mainly applies to bedroom, study, etc., also to the low-height room or parlour. Use the flat ceiling's pattern, put the top pipelines inside the ceiling, and the top plane can be inserted with down lights or daylight lamps, forming two levels without making a sense of repression. Special-shaped ceiling's cloud-shaped waves or irregular arcs do not exceed one third of the whole top plane's area, and more or less than the proportion will not achieve a good effect.

Caisson Ceiling

Caisson ceiling has premises, demanding your house must big enough and has a certain height, more than 2.85 m. The pattern is making partial ceiling around the house, and it can be designed to one or two tiers. The finished effect has feelings of increasing the space's height, and also can change the indoor lighting effect.

Styles of Ceiling

Plane Ceiling

Plane ceiling refers to the ceiling without any design and layer, even, neat, decent, more economical than any other style, suitable for ceiling decorations of all kinds of habitable rooms. It is often jointed by various sorts of dalles or lime-washed, painted on the surface or pasted by wallpapers or wall cloths. If latex paints are used, plasterboard is recommended for the convenience of taking joints. If the ceiling is jointed by boards, the joint must be dealt with water-borne glue or epoxy resin.

Concave-convex Ceiling

Concave-convex ceiling refers to the ceiling with concave-convex structure on the surface. This kind of ceiling is complex in mould with strong sense of hierarchy, available for ceiling decorations such as halls, lobbies, and dining halls. It's often used in combination with all sorts of lights such as droplight, ceiling light, down light, spot light, etc.

Suspension Ceiling

Suspension ceiling refers to the ceiling that various boards, metals, and glasses are suspended on the structural layer. This kind of ceiling is rich in variation and dynamic effect, presenting a new beauty for people. It is often used for ceiling decorations in hotels, concerts, pavilions, cinemas, and so on. It always reflects artistic shadow and light through unique design produced by all kinds of lights.

Tic-tac-toe Ceiling

Tic-tac-toe ceiling is a kind of ceiling with the use of grillage beam as the guidance or a false grillage beam made for the design of the roofing. It's often decorated with lamps and lanterns and single layer or various decorative moldings in order to enrich the design of ceiling or make a proper division of the habitable room.

Glass Ceiling

Glass ceiling is a kind of ceiling that uses transparent, translucent or stained glass as the top surface for the benefit of lighting, appreciation, and beautifying the environment. It can be made for various forms such as round-ceiling, flat-ceiling and fold-ceiling, giving people a miracle feeling of brightness, freshness and spaciousness.

Materials of Ceiling

Light Steel Frame Plasterboard Ceiling

Plasterboard is made mainly from plaster of Paris incorporated in additives and fibres, with the properties of light weight, heat insulation, sound absorption, incombustibility, sawability, etc. The combination of plasterboard and light steel frame (made of pressed galvanized sheet steel) forms the light steel frame plasterboard. There are various types of light steel frame plasterboard, including thistle board, plasterboard for decoration, fibrous plasterboard, hollow gypsum lath. Plasterboard can be carved with various geometrical patterns or designs of natural scenery. With the advantages of fine stain ability on the surface and the merits that wallpaper can be pasted and paint brushed, plaster is considered as the main material of ceiling. Besides the use of ceiling, plasterboard is also a good material for making partitions owing to its cheaper price and simple construction.

Plywood Ceiling

Plywood ceiling is widely used in modern decoration. Plywood is produced as follows: first, a log is softened by means of steaming. Then it is cut into big slices along its annual ring. After that, these slices will be made to be plywood through desiccation, arrangement, gluing, assembly, heat pressing, and final trimming. This kind of plywood boasts the merits of light weight, strong intensity, fine elasticity and tenacity, impact and vibration resistance, workability and insulation. The reason why it is popular is that it has kinds of ceiling, including bent and round ceiling. However, it is accessible to termite. And the remedy for it is to spray anti-termite drug. The paint on the plywood ceiling may fade as time goes by and the remedy for it is to brush gloss oil at first before decoration and begin other procedures when it is dry.

Metal (Aluminous Pinch Plate) Ceiling

Metal ceiling has emerged and been spread in recent years and becomes the favorite among all ceilings. Compared with traditional materials, this kind of ceiling possesses various properties: elegant color and lustre, strong stereo perception, perfect decorative effect, especially when it is used together with other decorative materials such as face brick and marbles, they can form a quite harmonious overall effect of decoration. Metal ceiling has the characteristics of fire prevention, water repellency, light weight, strong intensity, non-aging, convenient installment, fine sound absorption and insulation.

Integrated Ceiling

Integrated ceiling is the trend of home decoration. Additionally, the request of the owner becomes higher in models and styles. Compared with the ceilings sold on the market, there are more designs for integrated ceiling no matter in materials, workmanship or styles with simple and fluent strips, beautiful design, elegant colors and lustre as well as many colors such as bronze, gold, red, blue, and milk-white. The specifications conform well to the width of ordinary house and blend well with doors and windows made of marble and aluminous alloy, which seem perfect in an elegant tranquil environment.

The above are surface materials for ceiling and also the main materials. Moreover, the main adjuvant material is frame. There are woody frame, light steel frame, and aluminium alloy frame. Frame is the basic skeleton structure and used for propping up, fixing decorative material and connecting the roofing or upper floor. Traditional frame material is mainly wood with the shortages of weak intensity, non-fire prevention and easiness to mildew and rot. However, light steel frame belongs to a kind of new material with the merits of light weight, strong intensity, fire-prevention, seismic resistance, convenient processing and installment.

天花吊顶知识点

吊顶的类型

吊顶一般有平板吊顶、格栅式吊顶、局部吊顶、异型吊顶、藻井式吊顶等几大类型。

平板吊顶

平板吊顶一般采用PVC板、铝扣板、石膏板、矿棉吸音板、玻璃纤维板、玻璃等材料，照明灯卧于顶部平面之内或吸于顶上。

格栅式吊顶

格栅式吊顶通常先用木材做成框架，镶嵌上透光或磨砂玻璃，光源在玻璃上面，它也是平板吊顶的一种，但是造型要比平板吊顶生动活泼，装饰效果比较好。它的优点是光线柔和、轻松和自然。

局部吊顶

局部吊顶是在居室的顶部有水、暖、气管道，而且房间的高度又不允许进行全部吊顶的情况下，采用的一种吊顶方式。这种方式的最好模式是，这些水、暖、气管道靠近边墙附近，装修出来的效果与异型吊顶相似。

异型吊顶

异型吊顶是局部吊顶的一种，主要用于卧室、书房等房间，楼层比较低的房间，客厅也可以采用异型吊顶。方法是用平板吊顶的形式，把顶部的管线遮挡在吊顶内，顶面可嵌入筒灯或日光灯，使装修后的顶面形成两个层次，不会产生压抑感。异型吊顶采用的云形波浪线或不规则弧线，一般不超过整体顶面面积的三分之一，超过或小于这个比例，都难以达到好的效果。

藻井式吊顶

藻井式吊顶的前提是，你的房间必须有一定的高度（高于2.85 m），且房间足够大。它的式样是在房间的四周进行局部吊顶，可设计成一层或两层，装修后的效果有增加空间高度的感觉，还可以改变室内的灯光照明效果。

吊顶的形式

平面式吊顶

平面式吊顶表面没有任何造型和层次，顶面构造平整、简洁、利落大方，较其他形式的吊顶较为经济，适用于各种居室的吊顶装饰。它常由各种类型的装饰板材拼接而成，也可以表面刷浆、喷涂、裱糊壁纸或墙布等。若刷乳胶漆推荐石膏板拼接，便于处理接缝；用木板拼接接口，一定要用水性胶或环氧树脂处理。

凹凸式吊顶

凹凸式吊顶是指表面具有凹入或凸出构造的一种吊顶。这种吊顶造型复杂，层次感强，适用于门厅、大厅、餐厅等的顶面装饰。它常常与灯具（吊灯、吸顶灯、筒灯、射灯等）搭配使用。

悬吊式吊顶

悬吊式吊顶是将各种板材、金属、玻璃等悬挂在结构层上的一种吊顶形式。这种吊顶富于变化、动感，给人一种耳目一新的美感，常用于宾馆、音乐厅、展馆、影视厅等的吊顶装饰。它常通过各种灯饰形成别致的造型，充溢着光影的艺术趣味。

井格式吊顶

井格式吊顶是利用井字梁因形利导或为了顶面的造型所制作的假格梁的一种吊顶形式。它配合灯具以及单层或多种装饰线条进行装饰，以丰富天花板的造型或对居室进行合理分区。

玻璃式吊顶

玻璃式吊顶是利用透明、半透明或彩绘玻璃作为室内顶面的一种吊顶形式，主要是为了采光、观赏和美化环境，可以做成圆顶、平顶、折面顶等形式，给人以明亮、清新、宽敞的神奇感觉。

吊顶的材质

轻钢龙骨石膏板吊顶

石膏板是以熟石膏为主要原料掺入添加剂与纤维制成，具有质轻、绝热、吸声、不燃和可锯性等性能。石膏板与轻钢龙骨（由镀锌薄钢压制而成）相结合，便构成轻钢龙骨石膏板。轻钢龙骨石膏板吊顶有多种类型，包括纸面石膏板、装饰石膏板、纤维石膏板、空心石膏板条。石膏板上可雕刻各种各样的几何图案或者自然风景。石膏表面有较好的着色性，又可在其表面贴壁纸、刷涂料，因此成为吊顶的主要材料。由于价格便宜、施工简单等特点，除用于吊顶外，石膏板也是制作隔墙和隔断的极好材料。

夹板吊顶

夹板吊顶广泛用于现代装修中。夹板（也叫胶合板），是将原木经蒸煮软化后，沿年轮切成大张薄片，通过干燥、整理、涂胶、组坯、热压、锯边而成。这种类型的夹板具有材质轻、强度高、弹性和韧性好、耐冲击和振动、易加工和绝缘等优点。其受欢迎的原因在于能轻易地创造出各种各样造型的吊顶，包括弯曲的、圆的。但有个缺点：怕白蚁。补救方法是喷洒防白蚁药水。夹板吊顶的油漆随着时间的流逝会逐渐脱落，预防方法是在装修前一定要先刷清漆（光油），干了之后才能开始其他的工序。

金属（铝扣板）吊顶

金属吊顶是近几年才出现和普及的，目前它已成了吊顶的新宠儿。与传统材料相比，金属吊顶具有色泽优雅、立体感强、装饰效果好等特点，与其他装饰材料搭配使用，如面砖、大理石等可形成十分协调的整体装饰效果。金属吊顶防火、防水性能好，材质轻、强度高、不易老化、安装方便，具有良好的吸音、隔音性能。

集成吊顶

集成吊顶已成家装流行趋势，而且业主对款式和风格的要求也越来越高。相对于市面上的吊顶，集成吊顶无论是材质、制作工艺，还是样式都越来越多。集成吊顶线条简洁流畅，造型美观，色泽优雅，并且有古铜、黄金、红、蓝、奶白等颜色，规格恰好与普通住宅的宽度相吻合，与大理石、铝合金门窗等连接浑然一体，为恬静的居室环境锦上添花。

以上都是吊顶的面层材料，是主材。吊顶的主要辅料是龙骨。龙骨主要有木龙骨、轻钢龙骨、铝合金龙骨等。龙骨是吊顶的基本骨架结构，用于支撑、固定顶棚饰面材料，同时连接屋顶或上层楼板。传统的龙骨以木质的为主，缺点是强度小、不防火、易霉烂。轻钢龙骨属新型材料，它具有轻质、高强、防火与抗震性能好，加工和安装方便等优点。







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