HVAC cost

- **Estimating Labor Expenses for Repair Services**
  Estimating Labor Expenses for Repair Services Comparing Replacement Part Prices for Various Systems Reviewing Maintenance Plan Rates in Detail Exploring Payment Arrangements for Major Overhauls Analyzing Long Term Savings with Efficient Upgrades Investigating Seasonal Discounts from Service Providers Understanding Monthly Budgeting for HVAC Projects Balancing Initial Spending with Potential Savings Evaluating Total Costs for System Retrofits Preparing for Unexpected Repair Fees Weighing Return on Investment for Modern Equipment Identifying Hidden Expenses in Older Units
- **Understanding Local Building Code Requirements**
  Understanding Local Building Code Requirements Reviewing State Regulations for HVAC Installation Exploring County Permit Applications for Mobile Homes Navigating EPA 608 Certification Steps Recognizing UL Rated Components for Safety Determining Required Inspections for New Units Preparing Official Documents for System Upgrades Knowing When to Seek Professional Licensing Support Identifying Legal Mandates for Refrigerant Disposal Sorting Out Utility Guidelines for Meter Upgrades Meeting Deadlines for Permit Renewals Locating Reliable Compliance Resources for Homeowners
- **About Us**

In today's dynamic financial landscape, the importance of balancing initial spending with long-term savings cannot be overstated. As individuals and businesses navigate through economic fluctuations, technological advancements, and shifting priorities, a strategic approach to financial management becomes imperative. The delicate balance between immediate expenditures and future savings is not merely a matter of budgeting but a critical element in ensuring sustainable growth and stability.

Properly sealed ductwork prevents energy loss in mobile home HVAC systems **hvac mobile home** technician.

To begin with, understanding the necessity of initial spending is crucial. Often, these expenses are investments that lay the groundwork for future success. For instance, purchasing quality equipment can enhance productivity for businesses, while investing in education can significantly increase earning potential for individuals. However, it is essential to recognize that such expenditures should be aligned with long-term goals to avoid unnecessary debt or resource depletion.

On the other hand, prioritizing long-term savings is equally vital. Savings act as a financial safety net during unforeseen circumstances such as economic downturns or personal emergencies. Furthermore, they provide the capital needed for future investments and opportunities. By cultivating a habit of regular saving, individuals and organizations can ensure financial resilience and flexibility.

The challenge lies in achieving equilibrium between these two aspects-ensuring that immediate spending does not compromise future security while also making sure that an overemphasis on saving does not stifle growth or innovation. One effective strategy to achieve this balance is through comprehensive financial planning. By setting clear short-term and long-term objectives and regularly reviewing them against actual performance, one can make informed decisions about where to allocate resources most effectively.

Moreover, adopting a mindset that values both present needs and future aspirations can lead to more prudent financial behavior. This involves recognizing areas where costs can be minimized without sacrificing quality or outcomes-such as opting for energy-efficient solutions that reduce utility bills over time-and identifying investment opportunities that promise substantial returns.

In conclusion, balancing initial spending with long-term savings is a nuanced endeavor requiring foresight, discipline, and adaptability. It demands an appreciation of how present actions impact future possibilities and vice versa. By thoughtfully managing resources today

while keeping an eye on tomorrow's needs, we pave the way for enduring prosperity and peace of mind in an unpredictable world.

Factors Influencing Labor Costs in Mobile Home HVAC Repairs —

When discussing the various types of HVAC systems suitable for mobile homes, it's crucial to balance initial spending with potential savings. Mobile homes present unique challenges compared to traditional houses due to their size, structure, and often limited insulation. Therefore, selecting the right HVAC system is not only about comfort but also about making a financially sound decision that considers both short-term costs and long-term benefits.

One popular option for mobile homes is the packaged air conditioning system. This system combines both heating and cooling components in one unit, typically installed outside the home on a concrete slab or rooftop. The upfront cost for packaged systems can be higher than other options; however, they offer significant space savings inside the mobile home and tend to have lower maintenance costs over time. Their efficiency can lead to reduced energy bills, offsetting the initial expenditure.

Ductless mini-split systems are another viable choice for mobile homes, especially those without existing ductwork. These systems consist of an outdoor compressor and an indoor air-handling unit connected by a small conduit. While these units might require a moderate initial investment, they provide excellent zoned heating and cooling capabilities. This means you can control temperatures in individual rooms or areas of your home independently, which can lead to substantial energy savings since you're only using electricity where needed.

For those looking at more budget-friendly options initially, portable HVAC units or window air conditioners may be considered. While these options generally have lower upfront costs, they might not be as efficient or effective in maintaining consistent temperatures throughout the entire home. Furthermore, their operating costs can add up over time due to less efficient energy use.

When assessing these different HVAC systems for mobile homes, it's essential to consider factors such as climate conditions in your area and how often you'll be using your heating or cooling system. In colder climates, investing in a heat pump might prove beneficial despite its higher initial cost because it offers efficient heating during winter and effective cooling during summer months.

Ultimately, balancing initial spending with potential savings involves evaluating both immediate affordability and long-term economic impact. It's wise to consult with HVAC professionals who can provide detailed assessments based on your specific mobile home's needs and location before making any decisions.

Choosing the right HVAC system requires careful consideration of not just purchase price but also installation complexity, maintenance requirements, energy efficiency ratings (such as SEER for cooling), expected lifespan of equipment parts like compressors or coils all contributing factors in determining how well you balance today's expenses against tomorrow's utility bill reductions. By doing so thoughtfully now with thorough research into available technologies suited specifically towards accommodating smaller spaces found within manufactured housing environments while still ensuring optimal performance year-round regardless seasonal fluctuations outdoors affecting indoor ambient conditions therein lies key achieving successful outcome ultimately delivering desired return on investment appropriately tailored fit particular lifestyle choices made along journey owning living comfortably efficiently sustainably possible future generations enjoy too!

Posted by on

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Steps to Accurately Estimate Labor Expenses for HVAC Repair Services

When considering the installation or upgrade of a heating, ventilation, and air conditioning (HVAC) system, one of the most crucial decisions revolves around balancing initial spending with potential long-term savings. Evaluating the cost versus efficiency of various HVAC options requires a comprehensive understanding of both the financial outlay and the anticipated operational benefits over time. This decision-making process is pivotal not only for homeowners but also for businesses seeking to optimize energy use while managing budgets effectively.

At first glance, high-efficiency HVAC systems may seem prohibitively expensive due to their higher upfront costs compared to standard models. However, this initial sticker shock can be misleading if not considered alongside the broader context of operating expenses and energy consumption. High-efficiency systems are designed to consume less energy while providing superior climate control, which translates into lower utility bills over time. This aspect makes them particularly appealing in regions where energy costs are high or expected to rise.

In addition to energy savings, high-efficiency systems often come with added benefits such as improved air quality and enhanced comfort levels. Many modern units incorporate advanced filtration systems that reduce allergens and pollutants in indoor environments. Furthermore, these systems tend to have quieter operations and more consistent temperature regulation, contributing to an overall improved living or working environment.

However, it is important for consumers to assess whether these long-term benefits justify the higher initial investment. Calculating the payback period-the time it takes for the savings on energy bills to offset the additional cost-is essential in making an informed choice. For some homeowners or businesses with limited capital, opting for a less expensive system with moderate efficiency might be more feasible in the short term.

Another consideration is the availability of incentives or rebates from government programs aimed at promoting energy-efficient upgrades. Such financial incentives can significantly reduce the net cost of acquisition and installation of high-efficiency HVAC systems. Additionally, financing options like low-interest loans specifically tailored for green initiatives can further ease the burden of upfront costs.

Ultimately, evaluating various HVAC options involves a complex interplay between immediate financial considerations and future economic benefits. Decision-makers should perform a thorough analysis that includes not just purchase price comparison but also lifetime operating costs, potential increases in property value due to upgraded systems, and environmental impact considerations.

In conclusion, when balancing initial spending with potential savings on HVAC options, it is vital to adopt a holistic perspective that weighs all factors involved. While higher efficiency systems may require greater initial investment, they often offer substantial returns through reduced energy use and improved indoor conditions over time. By carefully evaluating these aspects alongside available financial incentives and personal circumstances, individuals and organizations can make choices that align best with their long-term goals and sustainability objectives.

Tools and Software for Estimating Labor Costs in Mobile Home HVAC Repairs

When selecting an HVAC system, the initial costs can often feel like a daunting hurdle. However, understanding the key factors influencing these expenses is crucial for making a well-informed decision that balances initial spending with potential long-term savings.

One of the primary considerations is the size and capacity of the system. An appropriately sized HVAC system will not only meet your immediate needs but also operate efficiently over time. Oversizing or undersizing can lead to increased energy consumption and higher utility bills, negating any savings you might have anticipated. Conducting a thorough load calculation ensures that you invest in a system that aligns perfectly with your requirements.

Another significant factor is the choice between different types of systems-central air conditioning, split systems, heat pumps, or ductless mini-splits. Each comes with its own set of costs and benefits. For example, while ductless mini-splits may have higher upfront costs compared to traditional systems, they offer flexibility and efficiency that could result in substantial savings on energy bills over time.

The quality and efficiency of the equipment also play a pivotal role in determining initial costs. High-efficiency units generally come with steeper price tags but promise lower operating expenses due to reduced energy consumption. Investing in high-efficiency equipment often qualifies for rebates or tax incentives which can offset some upfront costs and enhance future savings.

Installation complexity and associated labor charges are another aspect to consider. Systems requiring extensive ductwork modifications or intricate installations will naturally incur higher labor costs. It's essential to work with reputable contractors who provide transparent estimates and ensure quality workmanship, as poor installation can compromise system performance and lead to costly repairs down the line.

Furthermore, geographic location influences both initial purchase decisions and potential savings. Climate conditions dictate heating or cooling demands; thus impacting which systems are most cost-effective for your area. Moreover, local building codes or regulations might necessitate specific features that affect overall expenses.

Lastly, advancements in technology continually reshape what's available on the market-smart thermostats, zoned heating/cooling options, or environmentally friendly refrigerants are examples of innovations that could influence both initial investments and operational

efficiencies.

In conclusion, while initial costs are unquestionably important when selecting an HVAC system, they should be viewed within the broader context of potential savings achieved through careful planning and strategic choices. By taking into account factors such as size appropriateness, type selection, efficiency ratings, installation requirements, location-specific needs-and staying abreast of technological advancements-you can make an informed decision that balances short-term expenditures against long-term financial gains beautifully.

Case Studies: Examples of Labor Cost Estimation in Various Repair Scenarios

In today's rapidly evolving energy landscape, the need to balance initial spending with potential long-term savings is more crucial than ever. As individuals and businesses alike seek to reduce their carbon footprints and manage rising energy costs, strategic investments in energy efficiency can yield significant financial returns over time. Understanding how to effectively navigate this balance requires a nuanced approach that considers both immediate expenditures and future savings.

One of the primary strategies for reducing long-term energy costs involves investing in energy-efficient technologies. For homeowners, this might mean upgrading to Energy Star-rated appliances or installing solar panels. Although these upgrades require a substantial initial outlay, they can drastically decrease utility bills over time. Solar panels, for example, often pay for themselves within seven to ten years through reduced electricity costs while also increasing property value. Similarly, businesses can benefit from retrofitting lighting systems with LED technology or optimizing heating and cooling systems through advanced automation tools. These improvements not only lower energy consumption but also contribute to creating a more sustainable environment.

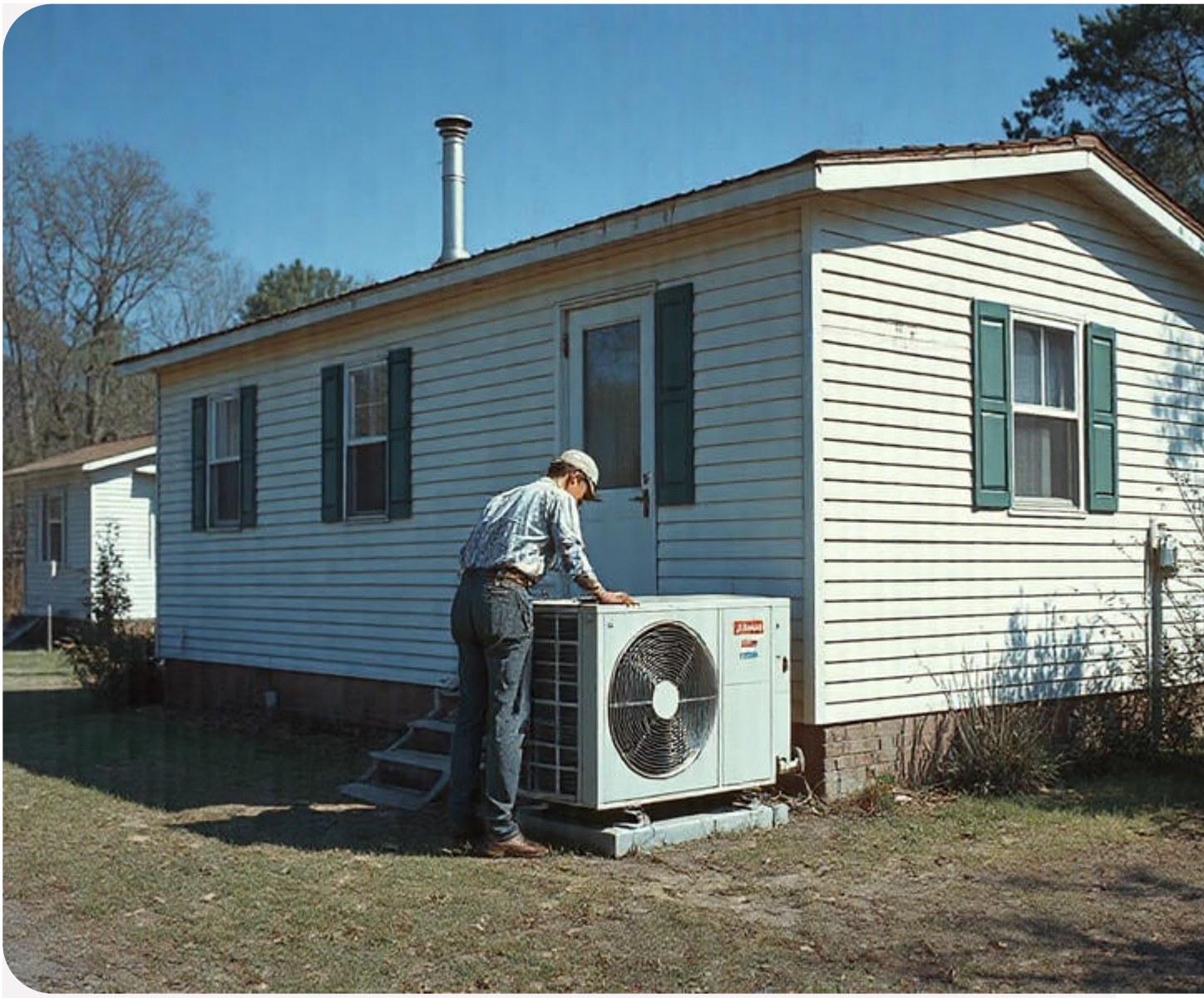
Another effective strategy is to conduct an energy audit to identify areas where efficiency can be improved without significant upfront costs. An energy audit provides detailed insights into current usage patterns and highlights opportunities for cost reductions through simple behavioral changes or minor adjustments in operations. Often, small measures such as adjusting thermostat settings, sealing air leaks around doors and windows, or using power strips to minimize phantom loads can result in meaningful savings without substantial investment.

Moreover, leveraging government incentives and rebates plays a pivotal role in offsetting the initial costs associated with implementing energy-saving measures. Many governments offer tax credits or rebates for renewable energy installations or other efficiency upgrades. These incentives not only make it more financially feasible for consumers to adopt new technologies but also shorten the payback period on investments.

Furthermore, adopting smart technology solutions represents another avenue for maximizing savings while balancing initial expenditure. Smart thermostats, for instance, learn household patterns and adjust temperatures accordingly-leading to optimized heating and cooling schedules that save money over time. Meanwhile, smart meters allow users to monitor real-time energy consumption data, enabling informed decisions about when and how much electricity is used.

Finally, fostering an organizational culture that prioritizes sustainability can drive significant change while managing costs effectively. Educating employees about simple practices like turning off lights when leaving a room or unplugging devices when not in use encourages responsible behavior that cumulatively reduces overall consumption.

In conclusion, balancing initial spending with potential savings requires careful consideration of both short-term sacrifices and long-term gains. By investing strategically in efficient technologies, conducting regular audits for continuous improvement opportunities, taking advantage of available incentives, embracing smart solutions-and encouraging widespread adoption through education-individuals and organizations alike stand poised not only to reduce their environmental impact but also achieve substantial financial benefits well into the future.



Tips for Managing and Reducing Labor Expenses Without Compromising Quality

In the realm of cost management, particularly when considering the balance between initial spending and potential savings, the importance of proper installation and maintenance cannot be overstated. These two elements serve as critical pillars in ensuring that investments not only meet their intended performance standards but also deliver long-term financial benefits. By prioritizing proper installation and regular maintenance, businesses can effectively manage costs while maximizing the value of their assets.

When a new system or piece of equipment is introduced, the temptation to cut corners on installation expenses can be strong. However, improper installation often leads to inefficiencies, increased energy consumption, and premature wear and tear-issues that ultimately inflate operating costs over time. A poorly installed HVAC system, for example, may struggle to maintain desired temperatures efficiently, leading to higher utility bills and more frequent breakdowns. Conversely, investing in skilled professionals for proper installation helps ensure optimal performance from day one, laying a solid foundation for future savings.

Moreover, ongoing maintenance plays an equally vital role in controlling costs. Regular inspections and servicing are essential for identifying potential issues before they escalate into major repairs or replacements. Preventive maintenance not only extends the lifespan of equipment but also enhances its efficiency-a key factor in reducing operational expenses. For instance, routine cleaning and tuning of machinery can significantly improve energy efficiency, translating into lower monthly energy bills.

Beyond direct cost implications, proper installation and maintenance contribute to enhanced safety and compliance with industry regulations-both crucial for avoiding costly fines or legal issues. Adherence to safety standards through diligent upkeep ensures a secure environment for employees while safeguarding valuable assets against damage or loss.

Furthermore, consistent investment in these practices fosters trust with stakeholders by demonstrating a commitment to quality and reliability. Customers are more likely to remain loyal when they see that a company values durability and performance over short-term gains achieved by skimping on essential processes.

In conclusion, while initial spending on proper installation may seem like an added expense upfront, it is an investment that yields significant returns through sustained efficiency and reduced maintenance needs down the line. Similarly, regular upkeep transforms potential liabilities into opportunities for savings by preventing costly disruptions and optimizing resource use. By balancing initial expenditures with thoughtful long-term planning in these

areas, businesses can achieve a harmonious blend of economic prudence and operational excellence-a strategy that ultimately strengthens their competitive edge in today's dynamic market landscape.

About Modular building

For the Lego series, see Lego Modular Buildings.

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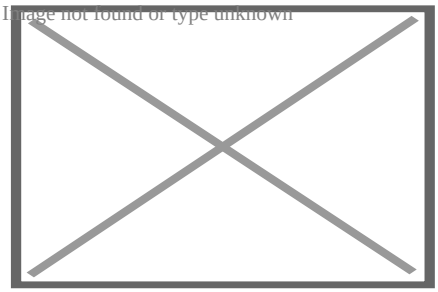
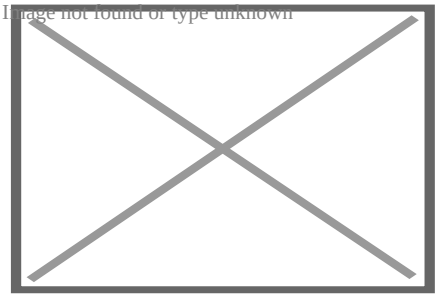


Prefabricated house in Valencia, Spain.

A **modular building** is a prefabricated building that consists of repeated sections called modules.[1] Modularity involves constructing sections away from the building site, then delivering them to the intended site. Installation of the prefabricated sections is completed on site. Prefabricated sections are sometimes placed using a crane. The modules can be placed side-by-side, end-to-end, or stacked, allowing for a variety of configurations and styles. After placement, the modules are joined together using inter-module connections, also known as inter-connections. The inter-connections tie the individual modules together to form the overall building structure.[2]

Uses

[edit]



Modular home prefab sections to be placed on the foundation

Modular buildings may be used for long-term, temporary or permanent facilities, such as construction camps, schools and classrooms, civilian and military housing, and industrial facilities. Modular buildings are used in remote and rural areas where conventional construction may not be reasonable or possible, for example, the Halley VI accommodation pods used for a BAS Antarctic expedition.[3] Other uses have included churches, health care facilities, sales and retail offices, fast food restaurants and cruise ship construction. They can also be used in areas that have weather concerns, such as hurricanes. Modular buildings are often used to provide temporary facilities, including toilets and ablutions at events. The portability of the buildings makes them popular with hire companies and clients alike. The use of modular buildings enables events to be held at locations where existing facilities are unavailable, or unable to support the number of event attendees.

Construction process

[edit]

Construction is offsite, using lean manufacturing techniques to prefabricate single or multi-story buildings in deliverable module sections. Often, modules are based around standard 20 foot containers, using the same dimensions, structures, building and stacking/placing techniques, but with smooth (instead of corrugated) walls, glossy white paint, and provisions for windows, power, potable water, sewage lines, telecommunications and air conditioning. Permanent Modular Construction (PMC) buildings are manufactured in a controlled setting and can be constructed of wood, steel, or concrete. Modular components are typically constructed indoors on assembly lines. Modules' construction may take as little as ten days but more often one to three months. PMC modules can be integrated into site built projects or stand alone and can be delivered with MEP, fixtures and interior finishes.

The buildings are 60% to 90% completed offsite in a factory-controlled environment, and transported and assembled at the final building site. This can comprise the entire building or be components or subassemblies of larger structures. In many cases, modular contractors work with traditional general contractors to exploit the resources and advantages of each type of construction. Completed modules are transported to the building site and assembled by a crane.[4] Placement of the modules may take from several hours to several days. Off-site construction running in parallel to site preparation providing a shorter time to project completion is one of the common selling points of modular construction. Modular construction timeline

Permanent modular buildings are built to meet or exceed the same building codes and standards as site-built structures and the same architect-specified materials used in conventionally constructed buildings are used in modular construction projects. PMC can have as many stories as building codes allow. Unlike relocatable buildings, PMC structures are intended to remain in one location for the duration of their useful life.

Manufacturing considerations

[edit]

The entire process of modular construction places significance on the design stage. This is where practices such as Design for Manufacture and Assembly (DfMA) are used to ensure that assembly tolerances are controlled throughout manufacture and assembly on site. It is vital that there is enough allowance in the design to allow the assembly to take up any "slack" or misalignment of components. The use of advanced CAD systems, 3D printing and manufacturing control systems are important for modular construction to be successful. This is quite unlike on-site construction where the tradesman can often make the part to suit any particular installation.

Bulk materials

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  Bulk
  materials
  Walls attached to floor

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  Walls attached to
  floor
  Ceiling drywalled in spray booth

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  spray booth
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  Roof set in place

Roof shingled and siding installed

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  Two-story modular dwelling
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Pratt Modular Home in
Tyler Texas

Upfront production investment

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The development of factory facilities for modular homes requires significant upfront investment. To help address housing shortages in the 2010s, the United Kingdom Government (via Homes England) invested in modular housing initiatives. Several UK companies (for example, Ilke Homes, L&G Modular Homes, House by Urban Splash, Modulous, TopHat and Lighthouse) were established to develop modular homes as an alternative to traditionally-built residences, but failed as they could not book revenues quickly enough to cover the costs of establishing manufacturing facilities.

IIke Homes opened a factory in Knaresborough, Yorkshire in 2018, and Homes England invested £30m in November 2019,[5] and a further £30m in September 2021.[6] Despite a further fund-raising round, raising £100m in December 2022,[7][8] Ilke Homes went into administration on 30 June 2023,[9][10] with most of the company's 1,150 staff made redundant,[11] and debts of £320m,[12] including £68m owed to Homes England.[13]

In 2015 Legal & General launched a modular homes operation, L&G Modular Homes, opening a 550,000 sq ft factory in Sherburn-in-Elmet, near Selby in Yorkshire.[14] The company incurred large losses as it invested in its factory before earning any revenues; by 2019, it had lost over £100m.[15] Sales revenues from a Selby project, plus schemes in Kent and West Sussex, started to flow in 2022, by which time the business's total losses had grown to £174m.[16] Production was halted in May 2023, with L&G blaming local planning delays and the COVID-19 pandemic for its failure to grow its sales pipeline.[17][18] The enterprise incurred total losses over seven years of £295m.[19]

Market acceptance

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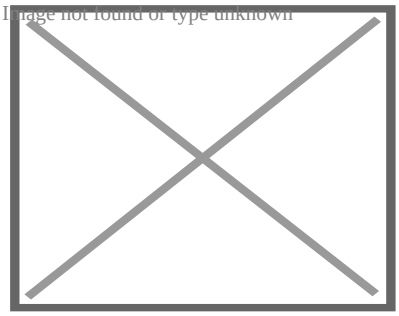

Raines Court is a multi-story modular housing block in Stoke Newington, London, one of the first two residential buildings in Britain of this type. (December 2005)

Some home buyers and some lending institutions resist consideration of modular homes as equivalent in value to site-built homes.[*citation needed*] While the homes themselves may be of equivalent quality, entrenched zoning regulations and psychological marketplace factors may create hurdles for buyers or builders of modular homes and should be considered as part of the decision-making process when exploring this type of home as a living and/or investment option. In the UK and Australia, modular homes have become accepted in some regional areas; however, they are not commonly built in major cities. Modular homes are becoming increasingly common in Japanese urban areas, due to improvements in design and quality, speed and compactness of onsite assembly, as well as due to lowering costs and ease of repair after earthquakes. Recent innovations allow modular buildings to be indistinguishable from site-built structures.[20] Surveys have shown that individuals can rarely tell the difference between a modular home and a site-built home.[21]

Modular homes vs. mobile homes

[edit]

Differences include the building codes that govern the construction, types of material used and how they are appraised by banks for lending purposes. Modular homes are built to either local or state building codes as opposed to manufactured homes, which are also built in a factory but are governed by a federal building code.[22] The codes that govern the construction of modular homes are exactly the same codes that govern the construction of site-constructed homes.[*citation needed*] In the United States, all modular homes are constructed according to the International Building Code (IBC), IRC, BOCA or the code that has been adopted by the local jurisdiction.[*citation needed*] In some states, such as California, mobile homes must still be registered yearly, like vehicles or standard trailers, with the Department of Motor Vehicles or other state agency. This is true even if the owners remove the axles and place it on a permanent foundation.[23]

Recognizing a mobile or manufactured home

[edit]

A mobile home should have a small metal tag on the outside of each section. If a tag cannot be located, details about the home can be found in the electrical panel box. This tag should also reveal a manufacturing date.[*citation needed*] Modular homes do not have metal tags on the outside but will have a dataplate installed inside the home, usually under the kitchen sink or in a closet. The dataplate will provide information such as the manufacturer, third party inspection agency, appliance information, and manufacture date.

Materials

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The materials used in modular buildings are of the same quality and durability as those used in traditional construction, preserving characteristics such as acoustic insulation and energy efficiency, as well as allowing for attractive and innovative designs thanks to their versatility.[24] Most commonly used are steel, wood and concrete.[25]

- Steel: Because it is easily moldable, it allows for innovation in design and aesthetics.
- Wood: Wood is an essential part of most modular buildings. Thanks to its lightness, it facilitates the work of assembling and moving the prefabricated modules.
- Concrete: Concrete offers a solid structure that is ideal for the structural reinforcement of permanent modular buildings. It is increasingly being used as a base material in this type of building, thanks to its various characteristics such as fire resistance, energy savings, greater acoustic insulation, and durability.[26]

Wood-frame floors, walls and roof are often utilized. Some modular homes include brick or stone exteriors, granite counters and steeply pitched roofs. Modulars can be designed to sit on a perimeter foundation or basement. In contrast, mobile homes are constructed with a steel chassis that is integral to the integrity of the floor system. Modular buildings can be custom built to a client's specifications. Current designs include multi-story units, multi-family units and entire apartment complexes. The negative stereotype commonly associated with mobile homes has prompted some manufacturers to start using the term "off-site construction."

New modular offerings include other construction methods such as cross-laminated timber frames.[27]

Financing

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Mobile homes often require special lenders.[28]

Modular homes on the other hand are financed as site built homes with a construction loan

Standards and zoning considerations

[edit]

Typically, modular dwellings are built to local, state or council code, resulting in dwellings from a given manufacturing facility having differing construction standards depending on the final destination of the modules.[29] The most important zones that manufacturers have to take into consideration are local wind, heat, and snow load zones.[*citation needed*] For example, homes built for final assembly in a hurricane-prone, earthquake or flooding area may include additional bracing to meet local building codes. Steel and/or wood framing are common options for building a modular home.

Some US courts have ruled that zoning restrictions applicable to mobile homes do not apply to modular homes since modular homes are designed to have a permanent foundation.[*citation needed*] Additionally, in the US, valuation differences between modular homes and site-built homes are often negligible in real estate appraisal practice; modular homes can, in some market areas, (depending on local appraisal practices per Uniform Standards of Professional Appraisal Practice) be evaluated the same way as site-built dwellings of similar quality. In Australia, manufactured home parks are governed by additional legislation that does not apply to permanent modular homes. Possible developments in equivalence between modular and site-built housing types for the purposes of real estate appraisals, financing and zoning may increase the sales of modular homes over time.[30]

CLASP (Consortium of Local Authorities Special Programme)

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The Consortium of Local Authorities Special Programme (abbreviated and more commonly referred to as CLASP) was formed in England in 1957 to combine the resources of local authorities with the purpose of developing a prefabricated school building programme. Initially developed by Charles Herbert Aslin, the county architect for Hertfordshire, the system was used as a model for several other counties, most notably Nottinghamshire and Derbyshire. CLASP's popularity in these coal mining areas was in part because the system permitted fairly straightforward replacement of subsidence-damaged sections of building.

Building strength

[edit]

Modular Home being built in Vermont photo by Josh Vignona

Modular home in Vermont

Modular homes are designed to be stronger than traditional homes by, for example, replacing nails with screws, adding glue to joints, and using 8–10% more lumber than conventional housing.[31] This is to help the modules maintain their structural integrity as they are transported on trucks to the construction site. However, there are few studies on the response of modular buildings to transport and handling stresses. It is therefore presently difficult to predict transport induced damage.[1]

When FEMA studied the destruction wrought by Hurricane Andrew in Dade County Florida, they concluded that modular and masonry homes fared best compared to other construction.[32]

CE marking

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The CE mark is a construction norm that guarantees the user of mechanical resistance and strength of the structure. It is a label given by European community empowered authorities for end-to-end process mastering and traceability.[*citation needed*]

All manufacturing operations are being monitored and recorded:

- Suppliers have to be known and certified,
- Raw materials and goods being sourced are to be recorded by batch used,
- Elementary products are recorded and their quality is monitored,
- Assembly quality is managed and assessed on a step by step basis,
- When a modular unit is finished, a whole set of tests are performed and if quality standards are met, a unique number and EC stamp is attached to and on the unit.

This ID and all the details are recorded in a database, At any time, the producer has to be able to answer and provide all the information from each step of the production of a single unit, The EC certification guaranties standards in terms of durability, resistance against wind and earthquakes.[*citation needed*]

Open modular building

[edit]
See also: Green building

The term Modularity can be perceived in different ways. It can even be extended to building P2P (peer-to-peer) applications; where a tailored use of the P2P technology is with the aid of a modular paradigm. Here, well-understood components with clean interfaces can be combined to implement arbitrarily complex functions in the hopes of further proliferating self-organising P2P technology. Open modular buildings are an excellent example of this. Modular building can also be open source and green. Bauwens, Kostakis and Pazaitis[33] elaborate on this kind of modularity. They link modularity to the construction of houses.

This commons-based activity is geared towards modularity. The construction of modular buildings enables a community to share designs and tools related to all the different parts of house construction. A socially-oriented endeavour that deals with the external architecture of buildings and the internal dynamics of open source commons. People are thus provided with the tools to reconfigure the public sphere in the area where they live, especially in urban environments. There is a robust socializing element that is

reminiscent of pre-industrial vernacular architecture and community-based building.[34]

Some organisations already provide modular housing. Such organisations are relevant as they allow for the online sharing of construction plans and tools. These plans can be then assembled, through either digital fabrication like 3D printing or even sourcing low-cost materials from local communities. It has been noticed that given how easy it is to use these low-cost materials are (for example: plywood), it can help increase the permeation of these open buildings to areas or communities that lack the know-how or abilities of conventional architectural or construction firms. Ergo, it allows for a fundamentally more standardised way of constructing houses and buildings. The overarching idea behind it remains key - to allow for easy access to user-friendly layouts which anyone can use to build in a more sustainable and affordable way.

Modularity in this sense is building a house from different standardised parts, like solving a jigsaw puzzle.

3D printing can be used to build the house.

The main standard is OpenStructures and its derivative Autarkytecture.[35]

Research and development

[edit]

Modular construction is the subject of continued research and development worldwide as the technology is applied to taller and taller buildings. Research and development is carried out by modular building companies and also research institutes such as the Modular Building Institute[36] and the Steel Construction Institute.[37]

See also

[edit]

- Image not found or type unknown Housing portal
- Affordable housing
- Alternative housing
- Commercial modular construction
- Construction 3D printing
- Container home
- Kit house
- MAN steel house
- Manufactured housing
- Modern methods of construction
- Modular design
- Portable building
- Prefabrication

- Open-source architecture
- Open source hardware
- OpenStructures
- Prefabricated home
- Relocatable buildings
- Recreational vehicles
- Shipping container architecture
- Stick-built home
- Tiny house movement
- Toter

References

[edit]

1. ^ ***a b*** *Lacey, Andrew William; Chen, Wensu; Hao, Hong; Bi, Kaiming (2018). "Structural Response of Modular Buildings – An Overview". Journal of Building Engineering.* ***16****: 45–56. doi:10.1016/j.jobe.2017.12.008. hdl:20.500.11937/60087.*
2. **^** *Lacey, Andrew William; Chen, Wensu; Hao, Hong; Bi, Kaiming (2019). "Review of bolted inter-module connections in modular steel buildings". Journal of Building Engineering.* ***23****: 207–219. doi:10.1016/j.jobe.2019.01.035. S2CID 86540434.*
3. **^** *"Halley VI Research Station – British Antarctic Survey". Bas.ac.uk. Retrieved 2016-05-03.*
4. **^** *"Why Build Modular?". Modular.org. Retrieved 2016-05-03.*
5. **^** *Morby, Aaron (4 November 2019). "Government pumps £30m into modular house builder". Construction Enquirer. Retrieved 14 March 2024.*
6. **^** *Morby, Aaron (27 September 2021). "Ilke Homes raises £60m for top 10 house builder plan". Construction Enquirer. Retrieved 14 March 2024.*
7. **^** *Morby, Aaron (6 December 2022). "Ilke Homes pulls off £100m record-breaking fund raise". Construction Enquirer. Retrieved 14 March 2024.*
8. **^** *O'Connor, Rob (6 December 2022). "ilke Homes announces new £100m investment". Infrastructure Intelligence. Retrieved 14 March 2024.*
9. **^** *Gardiner, Joey (30 June 2023). "Ilke Homes sinks into administration with most of firm's 1,100 staff set to lose their jobs". Building. Retrieved 14 March 2024.*
10. **^** *Riding, James (30 June 2023). "Modular house builder Ilke Homes enters administration with majority of staff to be made redundant". Inside Housing. Retrieved 14 March 2024.*
11. **^** *Morby, Aaron (30 June 2023). "Ilke Homes falls into administration". Construction Enquirer. Retrieved 14 March 2024.*
12. **^** *Prior, Grant (25 August 2023). "Ilke Homes went under owing £320m". Construction Enquirer. Retrieved 14 March 2024.*
13. **^** *Willmore, James (14 February 2024). "Homes England to lose most of £68.8m it is owed from Ilke Homes following collapse". Inside Housing. Retrieved 14 March 2024.*
14. **^** *Dale, Sharon (11 May 2020). "Head of Legal & General modular homes factory reveals plans for its future". Yorkshire Post. Retrieved 20 March 2024.*

15. ^ *Morby, Aaron (30 November 2020). "L&G modular homes losses exceed £100m". Construction Enquirer. Retrieved 20 March 2024.*
16. ^ *Morby, Aaron (3 October 2022). "L&G modular homes amassed loss deepens to £174m". Construction Enquirer. Retrieved 20 March 2024.*
17. ^ *Prior, Grant (4 May 2023). "L&G halts production at modular homes factory". Construction Enquirer. Retrieved 20 March 2024.*
18. ^ *Kollewe, Julia (4 May 2023). "Legal & General halts new production at modular homes factory near Leeds". The Guardian.*
19. ^ *Morby, Aaron (6 November 2023). "L&G modular homes foray amassed £295m of losses". Construction Enquirer. Retrieved 20 March 2024.*
20. ^ *fab, ukporta (19 August 2020). "prefabricated structures". ukportaprefab. Retrieved 4 September 2020.*
21. ^ *"Factory-Built Construction and the American Homebuyer: Perceptions and Opportunities" (PDF). Huduser.gov. p. 9. Retrieved 2017-09-10.*
22. ^ *Solutions, Dryside Property – Jennifer Mitchell and Magic Web. "Mobile homes vs Manufactured homes vs Modular homes". Drysideproperty.com. Retrieved 2018-03-09.*
23. ^ *"HCD Manufactured and Mobile Homes". Hcd.ca.gov.*
24. ^ Métodos modernos de construcción (MMC): Fabricación modular. Upv.es. 2020-10-02 Retrieved 2022-09-08
25. ^ A guide to the latest modular building construction materials. Hydrodiseno.com. 2021-12-14 Retrieved 2022-09-05
26. ^ Construcción modular en hormigón: una tendencia al alza (PDF). Andece.org. p. 53. Retrieved 2022-07-06
27. ^ *"Prefabricated Housing Module Advances Wood Research at the University of British Columbia | 2017-05-15T00:00:00 | Perkins + Will News". Archived from the original on 2019-03-31. Retrieved 2019-03-31.*
28. ^ *"HUD Financing Manufactured (Mobile) Homes". Portal.hud.gov. Archived from the original on 2016-05-03. Retrieved 2016-05-03.*
29. ^ *"Australian Government modular home regulations". Austlii.edu.au. Retrieved 2007-10-21.*
30. ^ *"Building Codes for Modular Homes". Modularhomesnetwork.com. Retrieved 2010-08-06.*
31. ^ *"Disruptive Development: Modular Manufacturing In Multifamily Housing" (PDF). p. 35. Retrieved 10 September 2017.*
32. ^ *"FIA 22, Mitigation Assessment Team Report: Hurricane Andrew in Florida (1993)". Fema.gov.*
33. ^ Bouwens, M., Kostakis, V., & Pazaitis, A. 2019. The Commons Manifesto. University of Westminster Press, London, pg. 24
34. ^ Bouwens, M., Kostakis, V., & Pazaitis, A. 2019. The Commons Manifesto. University of Westminster Press, London, pg. 25
35. ^ *"Thomas Lommée & Christiane Hoegner - Autarkytecture | z33". Archived from the original on 2014-12-31. Retrieved 2015-01-01.*
36. ^ *"Modular Building Institute". Modular.org.*

37. ^ *"The Steel Construction Institute (SCI) UK Global Steel Expertise". Steel-sci.com.*

34 - "Volumetric modular construction trend gaining groun d". https://www.aa.com.tr/en/corporate-news/volumetric-modular-construction-trend-gaining-ground/2357158 06.09.2021

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About Prefabrication

Not to be confused with Preproduction.
"Prefab" redirects here. For other uses, see Prefab (disambiguation).

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Find sources: "Prefabrication" – news · newspapers · books · scholar · JSTOR *(September 2014) (Learn how and when to remove this message)*

Prefabrication is the practice of assembling components of a structure in a factory or other manufacturing site, and transporting complete assemblies or sub-assemblies to the construction site where the structure is to be located. Some researchers refer it to “various materials joined together to form a component of the final installation procedure“.

The most commonly cited definition is by Goodier and Gibb in 2007, which described the process of manufacturing and preassembly of a certain number of building components, modules, and elements before their shipment and installation on construction sites.[1]

The term *prefabrication* also applies to the manufacturing of things other than structures at a fixed site. It is frequently used when fabrication of a section of a machine or any movable structure is shifted from the main manufacturing site to another location, and the section is supplied assembled and ready to fit. It is not generally used to refer to electrical or electronic components of a machine, or mechanical parts such as pumps, gearboxes and compressors which are usually supplied as separate items, but to sections of the body of the machine which in the past were fabricated with the whole machine. Prefabricated parts of the body of the machine may be called 'sub-assemblies' to distinguish them from the other components.

Process and theory

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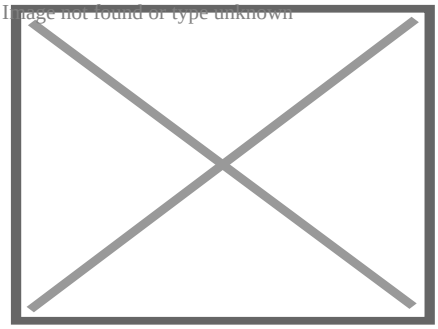

Levittown, Puerto Rico

An example from house-building illustrates the process of prefabrication. The conventional method of building a house is to transport bricks, timber, cement, sand, steel and construction aggregate, etc. to the site, and to construct the house on site from these materials. In prefabricated construction, only the foundations are constructed in this way, while sections of walls, floors and roof are prefabricated (assembled) in a factory (possibly with window and door frames included), transported to the site, lifted into place by a crane and bolted together.

Prefabrication is used in the manufacture of ships, aircraft and all kinds of vehicles and machines where sections previously assembled at the final point of manufacture are assembled elsewhere instead, before being delivered for final assembly.

The theory behind the method is that time and cost is saved if similar construction tasks can be grouped, and assembly line techniques can be employed in prefabrication at a location where skilled labour is available, while congestion at the assembly site, which wastes time, can be reduced. The method finds application particularly where the structure is composed of repeating units or forms, or where multiple copies of the same basic structure are being constructed. Prefabrication avoids the need to transport so many skilled workers to the construction site, and other restricting conditions such as a lack of power, lack of water, exposure to harsh weather or a hazardous environment are avoided. Against these advantages must be weighed the cost of transporting prefabricated sections and lifting them into position as they will usually be larger, more fragile and more difficult to handle than the materials and components of which they are made.

History

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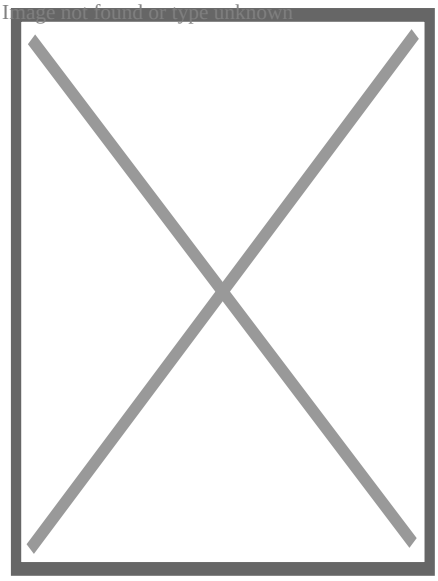

"Loren" Iron House, at Old Gippstown in Moe, Australia

Prefabrication has been used since ancient times. For example, it is claimed that the world's oldest known engineered roadway, the Sweet Track constructed in England around 3800 BC, employed prefabricated timber sections brought to the site rather than assembled on-site.[*citation needed*]

Sinhalese kings of ancient Sri Lanka have used prefabricated buildings technology to erect giant structures, which dates back as far as 2000 years, where some sections were prepared separately and then fitted together, specially in the Kingdom of Anuradhapura and Polonnaruwa.

After the great Lisbon earthquake of 1755, the Portuguese capital, especially the Baixa district, was rebuilt by using prefabrication on an unprecedented scale. Under the guidance of Sebastião José de Carvalho e Melo, popularly known as the Marquis de Pombal, the most powerful royal minister of D. Jose I, a new Pombaline style of architecture and urban planning arose, which introduced early anti-seismic design features and innovative prefabricated construction methods, according to which large multistory buildings were entirely manufactured outside the city, transported in pieces and then assembled on site. The process, which lasted into the nineteenth century, lodged the city's residents in safe new structures unheard-of before the quake.

Also in Portugal, the town of Vila Real de Santo António in the Algarve, founded on 30 December 1773, was quickly erected through the use of prefabricated materials en masse. The first of the prefabricated stones was laid in March 1774. By 13 May 1776, the centre of the town had been finished and was officially opened.

In 19th century Australia a large number of prefabricated houses were imported from the United Kingdom.

The method was widely used in the construction of prefabricated housing in the 20th century, such as in the United Kingdom as temporary housing for thousands of urban families "bombed out" during World War II. Assembling sections in factories saved time on-site and the lightness of the panels reduced the cost of foundations and assembly on site. Coloured concrete grey and with flat roofs, prefab houses were uninsulated and cold and life in a prefab acquired a certain stigma, but some London prefabs were occupied for much longer than the projected 10 years.[2]

The Crystal Palace, erected in London in 1851, was a highly visible example of iron and glass prefabricated construction; it was followed on a smaller scale by Oxford Rewley Road railway station.

During World War II, prefabricated Cargo ships, designed to quickly replace ships sunk by Nazi U-boats became increasingly common. The most ubiquitous of these ships was the American Liberty ship, which reached production of over 2,000 units, averaging 3 per day.

Current uses

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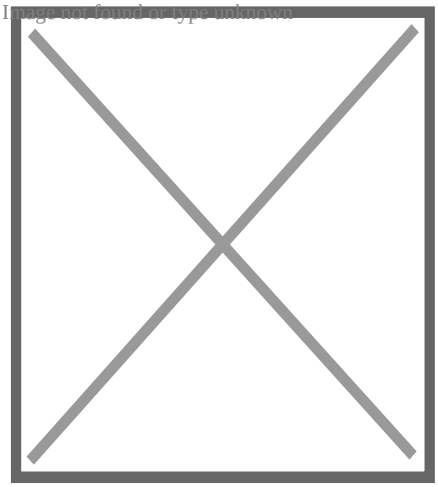


A house being built with prefabricated concrete panels.

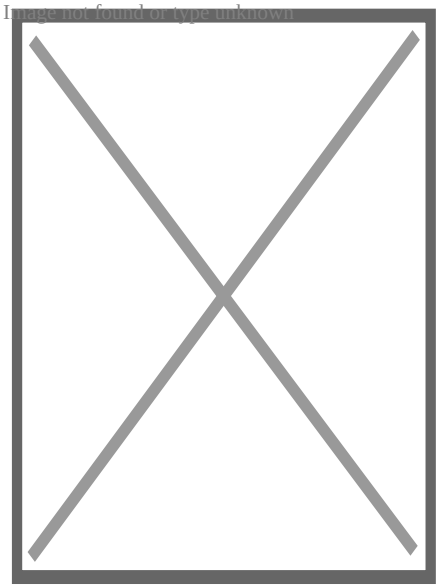
The most widely used form of prefabrication in building and civil engineering is the use of prefabricated concrete and prefabricated steel sections in structures where a particular part or form is repeated many times. It can be difficult to construct the formwork required to mould concrete components on site, and delivering wet concrete to the site before it starts to set requires precise time management. Pouring concrete sections in a factory brings the advantages of being able to re-use moulds and the concrete can be mixed on the spot without having to be transported to and pumped wet on a congested construction site. Prefabricating steel sections reduces on-site cutting and welding costs as well as the associated hazards.

Prefabrication techniques are used in the construction of apartment blocks, and housing developments with repeated housing units. Prefabrication is an essential part of the industrialization of construction.[3] The quality of prefabricated housing units had increased to the point that they may not be distinguishable from traditionally built units to those that live in them. The technique is also used in office blocks, warehouses and factory buildings. Prefabricated steel and glass sections are widely used for the exterior of large buildings.

Detached houses, cottages, log cabin, saunas, etc. are also sold with prefabricated elements. Prefabrication of modular wall elements allows building of complex thermal insulation, window frame components, etc. on an assembly line, which tends to improve quality over on-site construction of each individual wall or frame. Wood construction in particular benefits from the improved quality. However, tradition often favors building by hand in many countries, and the image of prefab as a "cheap" method only slows its adoption. However, current practice already allows the modifying the floor plan according to the customer's requirements and selecting the surfacing material, e.g. a personalized brick facade can be masoned even if the load-supporting elements are timber.

Today, prefabrication is used in various industries and construction sectors such as healthcare, retail, hospitality, education, and public administration, due to its many advantages and benefits over traditional on-site construction, such as reduced installation time and cost savings.[4] Being used in single-story buildings as well as in multi-story projects and constructions. Providing the possibility of applying it to a specific part of the project or to the whole of it.

The efficiency and speed in the execution times of these works offer that, for example, in the case of the educational sector, it is possible to execute the projects without the cessation of the operations of the educational facilities during the development of the same.



Transportation of prefabricated Airbus wing assembly

Prefabrication saves engineering time on the construction site in civil engineering projects. This can be vital to the success of projects such as bridges and avalanche galleries, where weather conditions may only allow brief periods of construction. Prefabricated bridge elements and systems offer bridge designers and contractors significant advantages in terms of construction time, safety, environmental impact, constructibility, and cost. Prefabrication can also help minimize the impact on traffic from bridge building. Additionally, small, commonly used structures such as concrete pylons are in most cases prefabricated.

Radio towers for mobile phone and other services often consist of multiple prefabricated sections. Modern lattice towers and guyed masts are also commonly assembled of prefabricated elements.

Prefabrication has become widely used in the assembly of aircraft and spacecraft, with components such as wings and fuselage sections often being manufactured in different countries or states from the final assembly site. However, this is sometimes for political rather than commercial reasons, such as for Airbus.

Advantages

[edit]

- Moving partial assemblies from a factory often costs less than moving pre-production resources to each site
- Deploying resources on-site can add costs; prefabricating assemblies can save costs by reducing on-site work
- Factory tools - jigs, cranes, conveyors, etc. - can make production faster and more precise
- Factory tools - shake tables, hydraulic testers, etc. - can offer added quality assurance
- Consistent indoor environments of factories eliminate most impacts of weather on production
- Cranes and reusable factory supports can allow shapes and sequences without expensive on-site falsework
- Higher-precision factory tools can aid more controlled movement of building heat and air, for lower energy consumption and healthier buildings
- Factory production can facilitate more optimal materials usage, recycling, noise capture, dust capture, etc.
- Machine-mediated parts movement, and freedom from wind and rain can improve construction safety
- Homogeneous manufacturing allows high standardization and quality control, ensuring quality requirements subject to performance and resistance tests, which also facilitate high scalability of construction projects. [5]

- The specific production processes in industrial assembly lines allow high sustainability, which enables savings of up to 20% of the total final cost, as well as considerable savings in indirect costs. [6]

Disadvantages

[edit]

- Transportation costs may be higher for voluminous prefabricated sections (especially sections so big that they constitute oversize loads requiring special signage, escort vehicles, and temporary road closures) than for their constituent materials, which can often be packed more densely and are more likely to fit onto standard-sized vehicles.
- Large prefabricated sections may require heavy-duty cranes and precision measurement and handling to place in position.

Off-site fabrication

[edit]

Off-site fabrication is a process that incorporates prefabrication and pre-assembly. The process involves the design and manufacture of units or modules, usually remote from the work site, and the installation at the site to form the permanent works at the site. In its fullest sense, off-site fabrication requires a project strategy that will change the orientation of the project process from construction to manufacture to installation. Examples of off-site fabrication are wall panels for homes, wooden truss bridge spans, airport control stations.

There are four main categories of off-site fabrication, which is often also referred to as off-site construction. These can be described as component (or sub-assembly) systems, panelised systems, volumetric systems, and modular systems. Below these categories different branches, or technologies are being developed. There are a vast number of different systems on the market which fall into these categories and with recent advances in digital design such as building information modeling (BIM), the task of integrating these different systems into a construction project is becoming increasingly a "digital" management proposition.

The prefabricated construction market is booming. It is growing at an accelerated pace both in more established markets such as North America and Europe and in emerging economies such as the Asia-Pacific region (mainly China and India). Considerable growth is expected in the coming years, with the prefabricated modular construction market expected to grow at a CAGR (compound annual growth rate) of 8% between 2022 and 2030. It is expected to reach USD 271 billion by 2030. [7]

See also

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- Prefabricated home
- Prefabricated buildings
- Concrete perpend
- Panelák
- Tower block
- St Crispin's School — an example of a prefabricated school building
- Nonsuch House, first prefabricated building
- Agile construction
- Intermediate good

References

[edit]

1. **^** (2022) Modularity clustering of economic development and ESG attributes in prefabricated building research. Frontiers in Environmental Science, 10. Retrieved from https://www.frontiersin.org/articles/10.3389/fenvs.2022.977887
2. **^** *Sargeant, Tony Anthony J. (11 November 2016) [2016-09-10]. "'Prefabs' in South London – built as emergency housing just after WW2 and meant to last for just 10 years". Tonyjsargeant.wordpress.com. Archived from the original on 14 October 2016. Retrieved 19 July 2018.*
3. **^** *Goh, Edward; Loosemore, Martin (4 May 2017). "The impacts of industrialization on construction subcontractors: a resource based view". Construction Management and Economics.* ***35*** *(5): 288–304. doi:10.1080/01446193.2016.1253856. ISSN 0144-6193.*
4. **^** Details about the modular construction market. Hydrodiseno.com. 2022-08-17. Retrieved 2023-01-05
5. **^** *Zhou, Jingyang; Li, Yonghan; Ren, Dandan (November 2022). "Quantitative study on external benefits of prefabricated buildings: From perspectives of economy, environment, and society". Sustainable Cities and Society.* ***86****. Bibcode:2022SusCS..8604132Z. doi:10.1016/j.scs.2022.104132.*
6. **^** Why Choose Modular Construction? Hydrodiseno.com. 2021-07-29. Retrieved 2023-03-07
7. **^** Modular Construction Market Size is projected to reach USD 271 Billion by 2030, growing at a CAGR of 8%: Straits Research. Globenewswire.com. 2022-06-18. Retrieved 2023-02-16

Sources

[edit]

"Prefabricated Building Construction Systems Adopted in Hong Kong" (PDF). Retrieved 20 August 2013.

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Jefferson Landing State Historic Site

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Cliff Cave County Park

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Jefferson County Museum

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Visit Jefferson County Tennessee

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Terry Self

(1)

Horrible workmanship, horrible customer service, don't show up when they say they are. Ghosted. Was supposed to come back on Monday, no call no show. Called Tuesday and Wednesday, left messages both days. Nothing. Kinked my line, crooked to the pad and house, didn't put disconnect back on, left the trash.....

Royal Supply Inc

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Toney Dunaway

(5)

This is another amazing place where we will do much more business. They are not tyrannical about the totally useless face diapers, they have a great selection of stock, they have very knowledgeable staff, very friendly staff. We got the plumbing items we really needed and will be getting more plumbing items. They also have central units, thermostats, caulking, sealants, doors, seems everything you need for a mobile home. We've found a local treasure and will be bringing much more business. Their store is clean and tidy as well!

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Ae Webb

(5)

Royal installed a new furnace and air conditioner just before we got our used mobile home. Recently, the furnace stopped lighting. Jared (sp?) made THREE trips to get it back to good. He was so gracious and kind. Fortunately for us it was still under warranty. BTW, those three trips were from Fenton, Missouri to Belleville, Illinois! Thanks again, Jared!

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bill slayton

(1)

Went to get a deadbolt what they had was one I was told I'd have take it apart to lengthen and I said I wasn't buying something new and have to work on it. Thing of it is I didn't know if it was so that it could be lengthened said I didn't wanna buy something new I had to work on just to fit my door. He got all mad and slung the whole box with part across the room. A real business man. I guess the owner approves of his employees doing as such.

Royal Supply Inc

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Gidget McCarthy

(5)

Very knowledgeable, friendly, helpful and don't make you feel like you're inconveniencing them. They seem willing to take all the time you need. As if you're the only thing they have to do that day. The store is clean, organized and not cluttered, symmetrical at that. Cuz I'm even and symmetricals biggest fan. It was a pleasure doing business with them and their prices are definitely reasonable. So, I'll be doing business with them in the future no doubt.

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