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Visual Management in Brazilian Construction Companies: Taxonomy and Guidelines for Implementation

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| 1             | Site layout organization - Using chain-link fences | - Marked pathways  
- Color coded helmets, material & workstations  
- ID cards & name tags  
- Material grouping  
- Site stock area IDs  
- Site maps  
- Area responsible personnel photos/contact | SS exists | Visual control in cement bags and bricks | - Company policies visually presented | Visual work instructions | On-site construction on quality control and assurance | - Productivity metrics  
- Quality metrics  
- Safety metrics | Visual information on the project environment for the workforce | - Color coded worker group and project performance boards | Simple mistake proofing device for pipe fitting | - Electrical fixtures fitted on bricks before bricklaying |
| 2             | Site layout organization - Using chain-link fences | - Color coded helmets, material & workstations  
- ID cards & name tags  
- Material grouping  
- Site stock area IDs  
- Location IDs  
- Site maps | SS exists | Visual control in cement bags and bricks | Prototypes of certain piping systems | - Slogans  
- Warnings  
- Visual ID of safety equipment on site | - Process charts  
- Color coded work aids  
- Visual work instructions | On-site construction on quality control and assurance | - Color coded worker group and project performance boards | Simple mistake proofing device for pipe fitting | - Electrical fixtures fitted on bricks before bricklaying |
| 3             | Site layout organization - Using chain-link fences | - Marked pathways  
- Color coded helmets, material & workstation  
- ID cards & name tags  
- Material grouping  
- Site stock area IDs  
- Location IDs  
- Site maps  
- Area responsible personnel photos/contact | | Card based (kanban) production control system for brick, cement, & electrical fixtures  
- A simple material tag based steel control system | Preparations for an stand system | - Safety signs  
- Company policies  
- Slogans  
- Best practices | - Process charts  
- Color coded work aids  
- Visual work instructions | On-site construction on quality control and assurance | - Supplier performance boards  
- Overall construction progress boards  
- Quality metrics  
- Safety metrics | Visual information on the project environment for the workforce | Simple mistake proofing device for pipe fitting |
| 4             | Site layout organization - Using glass where appropriate | - Marked pathways  
- Color coded helmets, material, tools & workstations  
- ID cards & name tags  
- Material grouping  
- Site stock area IDs  
- Location IDs  
- Site maps  
- Area responsible personnel photos/contact | | Concrete production leveling by using simple, colored beads | Prototypes of certain piping systems | - Safety information  
- Desired practices reminders by using the company mascot | - Process charts  
- Visual work instructions  
- ID coded magnetic board summarizing the important dates of the project planning | On-site construction on quality control and assurance | - Productivity metrics  
- Safety metrics  
- Financial metrics | Calendar summarizing important project events in the near future |
| 5             | Site layout organization - Using chain-link fences | - Marked pathways  
- Color coded helmets, material, tools & workstations  
- ID cards & name tags  
- Material grouping  
- Site stock area IDs  
- Location IDs  
- Site maps | | Concrete production leveling by using simple, colored beads | Prototypes of certain piping systems | - Safety information  
- Desired practices reminders by using the company mascot | - Process charts  
- Visual work instructions  
- ID coded magnetic board summarizing the important dates of the project planning | On-site construction on quality control and assurance | - Productivity metrics  
- Safety metrics  
- Financial metrics | Calendar summarizing important project events in the near future |
| 6 | Site layout organization - Using chain-link fences - Using glass where appropriate | Marked pathways - Color coded helmets, material, tools & workstation - ID cards & name tags - Material grouping - Site stock area IDs - Location IDs - Site maps - Area responsible personnel photos/contact | SS exists | Hand tools control boards - Card based (kanban) production control system for various materials | A heijunka board for on-site concrete production | Andon board system | Sampling for safety gears, personnel & material location matching - Prototypes of certain piping systems | Safety signs, worker emotions' boards, slogans, best practice, information on the production system | Process charts - Visual work instructions - Color coded magnetic project drawings - Various visual aids | On-site construction quality control and assurance | Productivity metrics - Safety metrics - Quality metrics - Financial metrics - Visual workers' mood board | Visual information on the project environment for the workforce | Electrical fixtures are fitted on bricks before bricklaying - Electrical and mechanical (piping, fixtures) prefabrication with visual information |
| 7 | Site layout organization - Using chain-link fences - Using glass where appropriate | Marked pathways - Color coded helmets, material, tools & workstation - ID cards & name tags - Material grouping - Site stock area IDs - Location IDs - Site maps - Area responsible personnel photos/contact | SS exists | Hand tools control boards - Scaffolding control - Card based (kanban) production control system for various materials | A heijunka board for on-site concrete production | Andon board system | Sampling for safety gears, personnel & material location matching - Prototypes of certain piping systems | Safety information, slogans, desired practices, reminders by using the company mascot | Process charts - Visual work instructions - Color coded magnetic project drawings - Various visual aids | On-site construction quality control and assurance | Productivity metrics - Safety metrics - Quality metrics - Financial metrics | Visual information on the project environment for the workforce | Simple mistake proofing for the installation of sinks | Electrical fixtures are fitted on bricks before bricklaying - Electrical and mechanical (piping, fixtures) prefabrication with visual information |
| 8 | Site layout organization - Using chain-link fences - Using glass where appropriate | Marked pathways - Color coded helmets, material, tools & workstation - ID cards & name tags - Material grouping - Site stock area IDs - Location IDs - Site maps - Area responsible personnel photos/contact | SS exists | Hand tools control boards - Card based (kanban) production control system for various materials | A heijunka board for on-site concrete production | Andon board system | Sampling for safety gears, personnel & material location matching - Prototypes of certain piping systems | Safety information, slogans, desired practices, reminders | Process charts - Visual work instructions - Color coded magnetic project drawings - Various visual aids | On-site construction quality control and assurance | Productivity metrics - Safety metrics - Quality metrics - Financial metrics | Visual information on the project environment for the workforce | Electrical fixtures are fitted on bricks before bricklaying - Electrical and mechanical (piping, fixtures) prefabrication with visual information |
| 9 | Site layout organization - Using chain-link fences | Marked pathways - Color coded helmets, material, tools & workstation - ID cards & name tags - Material grouping - Site stock area IDs - Location IDs | A simple station quality system by using colored cards | Safety information - Slogans - Desired practices - Reminders | Visual work instructions | On-site construction quality control and assurance | Productivity metrics - Safety metrics - Quality metrics | Visual information on the project environment for the workforce | Electrical fixtures are fitted on bricks before bricklaying - Electrical and mechanical (piping, fixtures) prefabrication with visual information |