

# Chapter 45 Manufacturing and Production Engineering Costs

## **Authoritative Sources**

[FAR 31.205-25](#)  
Manufacturing and  
Production Engineering  
Costs.

This chapter details the allowability of certain manufacturing and production engineering expenses, particularly with upgrading manufacturing capabilities.

This chapter addresses the following topics:

- 45-1 Allowability of Manufacturing and Production Engineering Costs
- 45-2 Allocability of Manufacturing and Production Engineering Costs
- 45-3 Differences Between Manufacturing Improvements and IR&D

## **General Audit Guidelines**

### **45-1 Allowability of Manufacturing and Production Engineering Costs**

The costs of upgrading manufacturing capabilities, along with the installation of new manufacturing capabilities, are allowable per FAR 31.205-25. Specifically, the following is allowable:

- Costs to develop and deploy new and improved materials, systems, processes, methods, equipment, tools and techniques that are or are expected to be used in producing products or services;
- Costs to develop and deploy new production lines;
- Improving current production functions, such as plant layout, production scheduling and control, methods and job analysis, equipment capabilities and capacities, inspection techniques, and tooling analysis (including tooling design and application improvements); and
- Material and manufacturing analysis for production suitability and to improve manufacturing processes, methods, and techniques.

Many of the above costs are large expenditures and should be capitalized and depreciated in accordance with the contractor's policies and, if applicable, [CAS 404](#). For the allowability of depreciation expenses (see [FAR 31.205-11](#), [CAS 409](#), and VIPER Chapter 19).

### **45-2 Allocability of Manufacturing and Production Engineering Costs**

Manufacturing and Production Engineering Costs are allowable per FAR; however, there is a significant risk of these expenses being charged to inappropriate final cost objectives. Auditors must ensure the costs are allocable in accordance with [FAR 31.201-4](#).

### **45-3 Differences Between Manufacturing Improvements and IR&D**

As discussed, all costs listed above in section 45-1 are allowable under FAR 31.205-25. The standard, however, clearly distinguishes between those expenses and Independent Research and Development (IR&D) costs. IR&D is intended to develop new products intended for sale or to improve existing ones whereas Manufacturing and Product Engineering does not relate to products intended for sale.

IR&D, defined at [FAR 31.205-18\(a\)](#) and CAS 420, is technical effort that is not sponsored by a grant or required in the performance of a contract and consists of projects falling within the following four areas:

1. basic research,
2. applied research,
3. development, and
4. systems and other concept formulation studies.

The accounting treatment of IR&D costs differs substantially from Manufacturing and Production Engineering costs. For more information on IR&D, see VIPER Chapter 33.

### **Callout**

**CLIN** – A Contract Line Item Number (CLIN) is a portion of a contract. Most contracts are funded at the CLIN level. ([Return](#))

### **Definitions**

**CAS 418 Materiality Criteria** – As stated in [FAR 9903.305](#),

“In determining whether amounts of cost are material or immaterial, the following criteria shall be considered where appropriate; no one criterion is necessarily determinative:

- (a) The absolute dollar amount involved. The larger the dollar amount, the more likely that it will be material.
- (b) The amount of contract cost compared with the amount under consideration. The larger the proportion of the amount under consideration to contract cost, the more likely it is to be material.

(c) The relationship between a cost item and a cost objective. Direct cost items, especially if the amounts are themselves part of a base for allocation of indirect costs, will normally have more impact than the same amount of indirect costs.

(d) The impact on Government funding. Changes in accounting treatment will have more impact if they influence the distribution of costs between Government and non-Government cost objectives than if all cost objectives have Government financial support.

(e) The cumulative impact of individually immaterial items. It is appropriate to consider whether such impacts:

(1) Tend to offset one another, or

(2) Tend to be in the same direction and hence to accumulate into a material amount.

(f) The cost of administrative processing of the price adjustment modification shall be considered. If the cost to process exceeds the amount to be recovered, it is less likely the amount will be material.” ([Return](#))

**Significant Deficiency** – As defined in DFARS 252.242-7005(b), a “Significant deficiency in the case of a contractor business system, means a shortcoming in the system that materially affects the ability of officials of the Department of Defense to rely upon information produced by the system that is needed for management purposes.” ([Return](#))