**Explanation of Core Cost, Tax, and Material Cost Calculations**

1. **Core Cost**
   * **Business Purpose**: Represents the credit for returning the old core part, reducing the total cost.
   * **Technical Calculation**:
     + Retrieved directly from the database field CORE\_CHARGE using the stored procedure CES\_INQUIRY.RETRIEVE\_RB.
     + Displayed as txtCoreCost.Text after currency formatting.
   * **SQL**:

sql

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-- Example stored procedure call (simplified):

EXEC CES\_INQUIRY.RETRIEVE\_RB @StockCode = m\_str\_LinkNumber, @RebuiltNumber = m\_str\_RBNumber

1. **Material Cost**
   * **Business Purpose**: Total cost of materials (stock/non-stock coded parts and rebuilt subcomponents) used in the rebuilt part.
   * **Technical Calculation**:
     + **Subtotals**:
       - **Rebuilt Parts**: Sum of TOTAL COST from CES\_INQUIRY.RETRIEVE\_RBP\_USED.
       - **Stock-Coded Parts**: Sum of TOTAL COST from CES\_INQUIRY.RETRIEVE\_SCP\_USED.
       - **Non-Stock-Coded Parts**: Sum of TOTAL COST from CES\_INQUIRY.RETRIEVE\_NSCP\_USED.
     + **Core Adjustment**: Subtract total core costs (from stock/non-stock parts).
     + **Formula**:

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Material Cost = (Rebuilt Parts Total + Stock-Coded Parts Total + Non-Stock-Coded Parts Total) - Core Cost Total

* + - Stored in txtMaterialTotal.Text via CES\_INQUIRY.RETRIEVE\_RBP\_TOTAL\_COST2.
  + **SQL**:

sql

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-- Example for retrieving material totals:

EXEC CES\_INQUIRY.RETRIEVE\_RBP\_TOTAL\_COST2 @RebuiltNumber = m\_str\_RBNumber, @Type = 'RB'

1. **Tax (Tx)**
   * **Business Purpose**: Sales tax applied to material costs.
   * **Technical Calculation**:
     + Tax Rate: Retrieved from system settings via CES\_INQUIRY.RETRIEVE\_CES\_SETTI (key: TAX\_RATE).
     + Tax Amount: Tax = Material Cost \* Tax Rate.
     + Stored in txtTaxTotal.Text.
   * **SQL**:

sql

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EXEC CES\_INQUIRY.RETRIEVE\_CES\_SETTI @Key = 'TAX\_RATE'

**Final Cost Breakdown**

* **Labour Total**: Subtotal (txtLabourSubtotal) + Overhead/Fringe (txtLabourOverheadAmount).
* **Total Rebuilt Part Cost (Pre-Tax)**:

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Labour Total + Material Cost - Core Cost

* **Total With Tax**:

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Total Rebuilt Part Cost + Tax

**Key SQL Stored Procedures**

| **Procedure** | **Purpose** |
| --- | --- |
| CES\_INQUIRY.RETRIEVE\_RB | Fetch core charge and metadata for the rebuilt part. |
| CES\_INQUIRY.RETRIEVE\_RBP\_USED | Retrieve rebuilt subcomponents and their costs. |
| CES\_INQUIRY.RETRIEVE\_SCP\_USED | Get stock-coded parts used in the rebuilt part. |
| CES\_INQUIRY.RETRIEVE\_NSCP\_USED | Fetch non-stock-coded parts (e.g., vendor-specific items). |
| CES\_INQUIRY.RETRIEVE\_CES\_SETTI | Retrieve system-wide settings like tax rate. |

**Business Logic Flow**

1. **Data Retrieval**: Fetch labour, material, and core costs from the database.
2. **Calculations**:
   * Apply overhead to labour.
   * Sum material costs and subtract core credit.
   * Compute tax on material costs.
3. **UI Updates**: Display formatted totals and enforce user permissions (e.g., hiding costs for restricted roles).

**Technical Notes**

* **Currency Handling**: All costs are formatted using Format(..., "currency") for display.
* **Error Handling**: Errors are logged to the database via modDBHelper.LogErrorToDB.
* **Permissions**: User access levels (e.g., g\_l\_AccessLevel) control visibility of sensitive fields like labour time and total costs.